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gccaagcatt gttgaagggt gataagtctg tcagagttat gcgttctttg ctggctgcac   1680

aacagacatt tgtagatcgg ttggtgcatc taatgaaggc agtacaacgc gaaagtggaa   1740

atcgtaagaa aaagaatgag agactacagg cattgcttgg ataatgaa aagatgaatt   1800

tgtcagatgt ggaacttatc ccgttgcctt tagaacccca agtgaaaatt agaggaataa   1860

ttccggaaac agctacactg tttaaaagtg cccttatgcc tgcacagttg tttttaaga   1920

cggaagatgg aggcaaatat ccagttatat ttaagcatgg agatgattta cgtcaagatc   1980

aacttattct tcaaatcatt tcactcatgg acaagctgtt acggaaagaa aatctggact   2040

tgaaattgac accttataag gtgttagcca ccagtacaaa acatggcttc atgcagttta   2100

tccagtcagt tcctgtggct gaagttcttg atacagaggg aagcattcag aacttttta   2160

gaaaatatgc accaagtgag aatgggccaa atgggattag tgctgaggtc atggacactt   2220

acgttaaaag ctgtgctgga tattgcgtga tcacctatat acttggagtt ggagacaggc   2280

acctggataa ccttttgcta acaaaaacag gaggctgagg caggagaatc gcttgaaccc   2340

gggaggcgga ggttgcagtg agccgagatt gcaccattgc actgcagact aggcaacaag   2400

atcaaaacgc catcttag                                                 2418


<210>  11
<211>  1894
<212>  DNA
<213>  Homo sapiens

<400>  11
cctgtaccta agttcccgct gtaggtggta cctttgcaga cggtgcgatg ggggaagcag     60

agaagtttca ctacatctat agttgtgacc tggatatcaa cgtccagctt aagataggaa    120

gcttggaagg gaagagagaa caaaagagtt ataaagctgt cctggaagac ccaatgttga    180

agttctcagg actatatcaa gagacatgct ctgatcttta tgttacttgt caagtttttg    240
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cagaagggaa gcctttggcc ttgccagtga gaacatccta caaagcattt agtacaagat    300

ggaactggaa tgaatggctg aaactaccag taaaataccc tgacctgccc aggaatgccc    360

aagtggccct caccatatgg gatgtgtatg gtcccggaaa agcagtgcct gtaggaggaa    420

caacggtttc gctctttgga aaatacggca tgtttcgcca agggatgcat gacttgaaag    480

tctggcctaa tgtagaagca gatggatcag aacccacaaa aactcctggc agaacaagta    540

gcactctctc agaagatcag atgagccgtc ttgccaagct caccaaagct catcgacaag    600

gacacatggt gaaagtagat tggctggata gattgacatt tagagaaata gaaatgataa    660

atgagagtgt gaaacgaagt tctaatttca tgtacctgat gggtggattt cgatgtgtca    720

agtgtgatga taaggaatat ggtattgttt attatgaaaa ggacggtgat gaatcatctc    780

caattttaac aagttttgaa ttagtgaaag ttcctgaccc ccagatgtcc ctggagaatt    840

tagttgagag caaacaccac aaccttcccc ggagtttaag aagtggacct tctgaccacg    900

atctgaaacc ctatccttcc ccgagagatc agttaaaaaa tattgtgagt tatcctccat    960

ccaagccacc cacatatgaa gaacaagatc ttgtttggga gtttagatat tatcttacga   1020

atcaagataa agccttgacc aaaatcctga catctgttat ttgggatcta cctcaggggg   1080

ccaaacaggc cttggcactt ctggggaaat ggaacccgat ggatgtagag gactccttgg   1140

agctgatatc ctctcattac accaacccaa ctgtgaggcg ttatgctgtt gcccggttgc   1200

gacaggccga tgatgaggat ttgttgatgt acctattaca attggtccag gctctcaaat   1260

atgaaaattt tgatgatata aagaatggat tggaacctac caagaaggat agtcagagtt   1320

cagtgtcaga aaatgtgtca aattctggaa taaattctgc agaaatagat agctcccaaa   1380

ttataaccag cccccttcct tcagtctctt cacctcctcc tgcatcaaaa acaaaagaag   1440

ttccagatgg cgaaaatctg aacaagatc tctgtacctt cttgatatcg agagcctgca   1500

aaaactcaac actggctaat tatttatact ggtatgtaaa aataattttc tgtttatttt   1560

cttattaccc ttaagaatta tttttctca tgctataaac acaaagatga tttaaaataa   1620

gatatgagca atcatcaaaa gtctagatat agtatttata tctaactgta ttccctgaca   1680

gctgggttca tggaaatgct tgttggcatc aacatttctc tccctttcac taaggatata   1740

actttccagg agctaggata taactgggga gggtaatggg tactttcagt ttaatatctg   1800

tttggcatgt aaagtagttg agtatgatat ttcacagttc ttcaggagta tatattttca   1860

cattatttac taaaacattg gaatcattta aaa                                1894
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<210> 12
<211> 750
<212> DNA
<213> Homo sapiens

<220>
<221> -
<222> (1)..(750)
<223> "n" can be any nucleotide 'a', 'c' , 'g' or 't'

<400> 12
cagtgngctc cgggccgccg gccgcagcca gcacccgccg cgccgcagct ccgggaccgg   60

ccccggccgc cgccgccgcg atgggcaacg ccgccgccgc caagaagggc agcgagcagg   120

agagcgtgaa agaattctta gccaaagcca aagaagattt tcttaaaaaa tgggaaagtc   180

ccgctcagaa cacagcccac ttggatcagt ttgaacgaat caagaccctc ggcacgggct   240

ccttcgggcg ggtgatgctg gtgaaacaca aggagaccgg gaaccactat gccatgaaga   300

tcctcgacaa acagaaggtg gtgaaactga aacagatcga acacaccctg aatgaaaagc   360

gcatcctgca agctgtcaac tttccgttcc tcgtcaaact cgagttctcc ttcaaggaca   420

actcaaactt atacatggtc atggagtacg tgcccggcgg ggagatgttc tcacacctac   480

ggcggatcgg aaggttcagg taagcgggcc acccccatc acatcaggct gtcagggtgt   540

ccacaggtgg cagtgcacga ccaagccccc tgggaatgca gaggagtcca gcatacttca   600

acatgcaggt ggtctcccag accctgtggg tttctgtttc ccctctgctg aggaatatgt   660

gatatttcaa ccaccacaaa ncaaaacaga gcaaacaggg caacttaggt gtccaaactg   720

aagttgctgc caggcgcggt ggttctcacc   750

<210> 13
<211> 794
<212> DNA
<213> Homo sapiens

<400> 13
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gtgagcttga agcccacagc ctggtcgctg cgccatgcgg tgggaccccg gccgcagact   120

ttccttctcg acccctacat tgccctcaat gtggacgact cgcgcatcgg ccaaacggcc   180

accaagcaga agaccaacag cccggcctgg cacgacgagt cgtcaccga tgtgtgcaac   240

ggacgcaaga tcgagctggc tgtctttcac gatgccccca taggctacga cgacttcgtg   300

gccaactgca ccatccagtt tgaggagctg ctgcagaacg ggagccgcca cttcgaggac   360

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tggattgatc tggagccaga aggaagagtg tatgtgatca tcgatctctc agggtcgtcg     420

ggtgaagtga aaatacctaa ctctgcattc tgtgaaaggg agagagttga aatgaggcac     480

agctgaagtt tcaccactcc attattctgc catcaagcat cccttcagct cccatctctc     540

aaatgctgca gccccatcaa tggaaaaaaa tacattcatg ggaattgcac aaagtttaca     600

acacatgcaa attccaagga gctcagagag aggtgtgggg gtgagatggt gtgactacac     660

ccccttcttc taggatgcgc cgaaggattc tttttcttgc tcatatgctg ttagaaagcc     720

tgggcgttta cgtctgctgg agctggagct aatgtgattt ctaactgtct aataaaattc     780

cactgcttgc aaaa                                                       794
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<210> 14
<211> 2083
<212> DNA
<213> Homo sapiens

<400> 14
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catcttgcat cagcctgtgg atgtatgcct accaccgggc tccttcacca gcaaagtgga      60

aaaagaagcg tttcacaaca aattcttctt tttgggttgg ggaaacgcag tggattatag     120

ctctgttttc ttctttccaa aactgtgcac ccctggatga aacctccatc aagggagacc     180

tacaagttgc ctggggttca gtgctctaga aagttccaag gtttgtggct tgaattattc     240

taaagaagct gaaataattg aagagaagca gaggccagct gtttttgagg atcctgctcc     300

acagagaatg ctctgcaccc gttgatactc cagttccaac accatcttct gagatgatcc     360

tgattcccag aatgctcttg gtgctgttcc tgctgctgcc tatcttgagt tctgcaaaag     420

ctcaggttaa tccagctata tgccgctatc ctctgggcat gtcaggaggc cagattccag     480

atgaggacat cacagcttcc agtcagtggt cagagtccac agctgccaaa tatggaaggc     540

tggactcaga agaaggggat ggagcctggt gccctgagat tccagtggaa cctgatgacc     600

tgaaggagtt tctgcagatt gacttgcaca ccctccattt tatcactctg gtggggaccc     660

aggggcgcca tgcaggaggt catggcatcg agtttgcccc catgtacaag atcaattaca     720

gtcgggatgg cactcgctgg atctcttggc ggaaccgtca tgggaaacag gtgctggatg     780

gaaatagtaa cccctatgac attttcctaa aggacttgga gccgcccatt gtagccagat     840

ttgtccggtt cattccagtc accgaccact ccatgaatgt gtgtatgaga gtggagcttt     900

acggctgtgt ctggctagat ggcttggtgt cttacaatgc tccagctggg cagcagtttg     960

tactccctgg aggttccatc atttatctga atgattctgt ctatgatgga gctgttggat    1020
```

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acagcatgac agaagggcta ggccaattga ccgatggtgt gtctggcctg gacgatttca      1080

cccagaccca tgaataccac gtgtggcccg gctatgacta tgtgggctgg cggaacgaga      1140

gtgccaccaa tggctacatt gagatcatgt ttgaatttga ccgcatcagg aatttcacta      1200

ccatgaaggt ccactgcaac aacatgtttg ctaaaggtgt gaagatcttt aaggaggtac      1260

agtgctactt ccgctctgaa gccagtgagt gggaacctaa tgccatttcc ttccccttg       1320

tcctggatga cgtcaacccc agtgctcggt ttgtcacggt gcctctccac caccgaatgg      1380

ccagtgccat caagtgtcaa taccattttg cagatacctg gatgatgttc agtgagatca      1440

ccttccaatc agatgctgca atgtacaaca actctgaagc cctgcccacc tctcctatgg      1500

cacccacaac ctatgatcca atgcttaaag ttgatgacag caacactcgg atcctgattg      1560

gctgcttggt ggccatcatc tttatcctcc tggccatcat tgtcatcatc ctctggaggc      1620

agttctggca gaaaatgctg gagaaggctt ctcggaggat gctggatgat gaaatgacag      1680

tcagcctttc cctgccaagt gattctagca tgttcaacaa taaccgctcc tcatcaccta      1740

gtgaacaagg gtccaactcg acttacgatc gcatctttcc ccttcgccct gactaccagg      1800

agccatccag gctgatacga aaactcccag aatttgctcc aggggaggag gagtcaggtg      1860

aggatgatgt ggtgggcagg gcgtcaaggg agaaacctca gcaagcatca ggtaggtatg      1920

acacgcctgc tcccagttca ttgcatctat ttttagtctc tgctaacctc ctgagaagtc      1980

cacattctct ttctagattt ggtctgccgc tgctcctggc ctaatttgag caactctcct      2040

ttgctactga atataagatg tgtggaggga cccacatacc aaa                        2083
```

<210> 15
<211> 1215
<212> DNA
<213> Homo sapiens

<400> 15

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gcggaatcct aaaccagccc aatttacatc cattcatgaa tctgtgacgt cagcaagcct       60

ttgggctcct ttgcggtggg ctggaggatt gtgtgggtgg aatccccctc ccctttattt      120

ttccaattct gcaaggcttt taaaattcac cttacatctt ttcaaagcaa gaaaatggaa      180

cagcatgtgt aggaattctt cgttgttgtt ttggagccct ctcttaagtc agaactctgt      240

cccaaaaatc ttctgagtgt catctcagga ctttggttat actcatggca cgatggccaa      300

ctttcaggag cacctgagct gctcctcttc tccacactta cccttcagtg aaagcaaaac      360

cttcaatgga ctacaagatg agctcacagc tatggggaac caccttctc ccaagctgct       420
```

```
cgaggaccag caggaaaagg ggatggtacg aacagagcta atcgagagcg tgcacagccc      480

cgtcaccaca acagtgttga cgagcgtaag tgaggattcc agggaccagt ttgagaacag      540

cgttcttcag ctaagggaac acgatgaatc agagacggcg gtgtctcagg ggaacagcaa      600

cacggtggac ggagagagca caagcggaac tgaagacata aagattcagt tcagcaggtc      660

aggcagtggc agtggtgggt ttcttgaagg actatttgga tgcttaaggc ctgtatggaa      720

tatcattggg aaggcatatt ccactgatta caaattgcag cagcaagata cttgggaagt      780

gccatttgag gagatctcag agctgcagtg gctgggtagt ggagcccaag gagcggtctt      840

cttgggcaag ttccgggcgg aagaggtggc catcaagaaa gtgagagaac agaatgagac      900

ggatatcaag catttgagga agttgaagca ccctaacatc atcgcattca agggtgtttg      960

tactcaggcc ccatgttatt gtattatcat ggaatactgt gcccatggac aactctacga     1020

ggtcttacga gctggcagga agatcacacc tcgattgcta gtagactggt ccacaggaat     1080

tgcaagtgga atgaattatt gcacctcca taaaattatt catcgtgatc tcaaatcacc     1140

taagtgagtt ctggggctaa tgtttcagct attttggttt gttgttttga aatacagaat     1200

ttttatcaac ctcaa                                                      1215


<210>  16
<211>  1327
<212>  DNA
<213>  Homo sapiens

<400>  16
gggattgtgc tatccaccat aaaaagcata gcatactgtg tgtatgtaag tcctcccagg       60

gcttcattct tgtataatat agaatatgta actatataca tatgattttt ttaactcagt      120

cactgtaatg gttcgtttta attttcatt ttggattttt ttttaatttc ctttgctact      180

tagattagaa agaacattga tctttcaaac atagatctga atatgaaaga gaaaagaaac      240

acttccatat ttggttagaa gtctatgtgt ggacagagat ggatacataa tttcacatgc      300

ttggcattcc tttttcacac tttaaaatca ggtaataagt cagtccatct gaggaaagcc      360

agttcaccaa atcttcatag acgacagtgg gagaaaaatg tacccaatac agctcttaca      420

gctttggaaa atgcatccat actcacctcc agtttaacag cagaggacga tagaggtggt      480

tctgtaataa agtacagcaa aaatactact cgtaagcagt ggctcaaaga gacccctgac      540

actttgttga acatccttaa gaatgctgat ctcagcttgg cttttcaaac atacacaata      600

tatagaccag gttcagaagg gttcttgaaa ggccccctgt ctgaagaaac agaagcatcg      660
```

```
gacagtgttg atggaggtca cgattctgtc attttggatc cagagcgact tgagcctggg      720

ctagatgagg aggacacgga ctttgaggag gaagatgaca accccgactg ggtgtcagag      780

ctgaagaagc gagctggatg gcaaggcctg tgcgacagat aatgcctgag gaaatgttcc      840

tgagtcacgc tgaggagagc cttcactcag gagttcatgc tgagatgatc atgagttcat      900

gcgacgtata ttttcctttg gaaacagaat gaagcagagg aaactcttaa tacttaaaat      960

cgttcttgat tagtatcgtg agtttgaaaa gtctagaact cctgtaagtt tttgaactca     1020

agggagaagg tatagtggaa tgagtgtgag catcgggctt tgcagtccca tagaacagaa     1080

atgggatgct agcgtgccac tacctacttg tgtgattgtg ggaaattact taacctcttc     1140

aagccccaat ttcctcaacc ataaaatgaa gataataatg cctacctcag agggatgctg     1200

accacagacc tttatagcag cccgtatgat attattcaca ttatgatatg tgtttattat     1260

tatgtgactc tttttacatt tcctaaaggt ttgagaatta aatatattta attatgaakw     1320

gaaaaaa                                                               1327


<210>    17
<211>    364
<212>    DNA
<213>    Homo sapiens

<400>    17
aattcggcac gaggtgggac tttcctctcg ctgcctcccg gctctgcccg cccttcgaaa       60

gtccagggtc cctgcccgct aggcaagttg cactcatggc acctccaagt gaagagacgc      120

ccctgatccc tcagcgttca tgcagcctct tgtccacgga ggctggtgcc ctgcatgtgc      180

tgctgcccgc tcggggcccc gggcccccc agcgcctatc tttctccttt ggggtccctg      240

tccgacctgt gggcgccaat ggccctcccc tgacctcagg gttccttggg ggctgggctg      300

aggcctcagt acagaggggg ctctggaaat gtttgttgac tgaataaagg aattcagtgg      360

aaac                                                                   364


<210>    18
<211>    923
<212>    DNA
<213>    Homo sapiens

<400>    18
cgctgctggg ctgcggcggc ggcggcggcg gtggttacta tggcggagtc ggccggagcc       60

tcctccttct tcccccttgt tgtcctcctg ctcgccggca gcggcgggtc cgggccccgg  .   120
```

```
ggggtccagg ctctgctgtg tgcgtgcacc agctgcctcc aggccaacta cacgtgtgag      180

acagatgggg cctgcatggt ttccwttttc aatctggatg ggatggagca ccatgtgcgc      240

acctgcatcc ccaaagtgga gctggtccct gccgggaagc ccttctactg cctgagctcg      300

gaggacctgc gcaacaccca ctgctgctac actgactact gcaacaggat cgacttgagg      360

gtgcccagtg gtcacctcaa ggagcctgag cacccgtcca tgtggggccc ggtggagctg      420

gtaggcatca tcgccggccc ggtgttcctc ctgttcctca tcatcatcat tgttttcctt      480

gtcattaact atcatcagcg tgtctatcac aaccgccaga gactggacat ggaagatccc      540

tcatgtgaga tgtgtctctc caaagacaag acgctccagg atcttgtcta cgatctctcc      600

acctcagggt ctggctcagg taccaagttc ttcagggcat catgtctgtg gttggctttc      660

atcagtttcc cagcaggata gagtgcttgt agagaaggct ggaggccctg catttgtttc      720

taccagcatt gagtcatttg gtttcctagt tccccttctt ttggagtctg acgtgtaata      780

agataagata atgggttcac agaaaatctc tcattccgtg ggattcccaa ggtctagtac      840

acaattatcc actacagaag tcctgcctct ctaagctttg caactgtacg tacatctatt      900

aaaattcagc tggtccccccc tga                                               923


<210>  19
<211>  1739
<212>  DNA
<213>  Homo sapiens

<220>
<221>  -
<222>  (1)..(1739)
<223>  "n" can be any nucleotide 'a', 'c' , 'g' or 't'


<400>  19
ccgccgcccg ggcccccggc atgcagcccc ggctgcggag gtgacactca cggaccttag       60

ccaccgccgc cgccatcgcc accatggacg aacaggaggc attgaactca atcatgaacg      120

atctggtggc cctccagatg aaccgacgtc accggatgcc tggatatgag accatgaaga      180

acaaagacac aggtcactca aataggcaga gtgacgtcag aatcaagttc gagcacaacg      240

gggagaggcg aattatagcg ttcagccggc ctgtgaaata tgaagatgtg gagcacaagg      300

tgacaacagt atttggacaa cctcttgatc tacattacat gaacaatgag ctctccatcc      360

tgctgaaaaa ccaagatgat cttgataaag caattgacat tttagataga agctcaagca      420

tgaaaagcct taggatattg ctgttgtccc aggacagaaa ccataacagt tcctctcccc      480
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```
actctgaggt gtccagacag gtgcggatca aggcttccca gtccgcaggg gatataaata    540

ctatctacca gcccccccgag cccagaagca ggcacctctc tgtcagctcc cagaaccctg    600

gccgaagctc acctccccct ggctatgttc ctgagcggca gcagcacatt gcccggcagg    660

ggtcctacac cagcatcaac agtgaggggg agttcatccc agagaccagc gagcagtgca    720

tgctggatcc cctgagcagt gcagaaaatt ccttgtctgg aagctgccaa tccttggaca    780

ggtcagcaga cagcccatcc ttccggaaat cacgaatgtc ccgtgcccag agcttccctg    840

acaacagaca ggaatactca gatcgggaaa ctcagcttta tgacaaaggg gtcaaaggtg    900

gaacctaccc ccggcgctac cacgtgtctg tgcaccacaa ggactacagt gatggcagaa    960

gaacatttcc ccgaatacgg cgtcatcaag gcaacttgtt caccctggtg ccctccagcc   1020

gctccctgag cacaaatggc gagaacatgg gtctggctgt gcaatacctg accccccgtg   1080

ggcgcctgcg gagtgcggac agcgagaatg ccctctctgt gcaggagagg aatgtgccaa   1140

ccaagtgtga ggagctgtcc ctggctagga ggagactgcc caggtggtct cagacaagct   1200

acgggggcaa acagctgggc ccctgggacc cttaggctca gcaggtggtg gctttggccc   1260

aaatgcacca catgggataa gccttggagt gtctgaagcc tggctccact attgtgtgac   1320

aagcctcttc tcctctctga atctttagtt tttccatgtt taaactaggg aaagaagcac   1380

acccttcatc cctgccatat taagatattt aggggggcttt ggaagggaaa tgcatttgaa   1440

tcaatgcang aagaagcatt taaccaatga ncttcagcca atcctctgnc ttcttaggac   1500

tctgacttca ggtccgnagt gactaggggc actggggctt gctccagatt gtggtgggag   1560

aatgctctac taagagattg atggggtgct ggggtggagg gggggaagcc tgnagcccaa   1620

gagaccctgt tcctggnaga atgaatgggg aatattcata aataatgtac acaaagtaac   1680

tctttccttc tgctctccct gttagctccc aagtgccccc catcaaacct gggcgcccg     1739
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<210> 20
<211> 1832
<212> DNA
<213> Homo sapiens

<220>
<221> -
<222> (1)..(1832)
<223> "n" can be any nucleotide 'a', 'c' , 'g' or 't'

<400> 20
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ccgccgcccg ggccccccggc atgcagcccc ggctgcggag gtgacactca cggaccttag      60
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ccaccgccgc cgccatcgcc accatggacg aacaggaggc attgaactca atcatgaacg    120

atctggtggc cctccagatg aaccgacgtc accggatgcc tggatatgag accatgaaga    180

acaaagacac aggtcactca aataggcaga aaaaacacaa cagcagcagc tcagcccttc    240

tgaacagccc cacagtaaca acaagctcat gtgcaggggc cagtgagaaa aagaaatttt    300

tgagtgacgt cagaatcaag ttcgagcaca cggggagag gcgaattata gcgttcagcc    360

ggcctgtgaa atatgaagat gtggagcaca aggtgacaac agtatttgga caacctcttg    420

atctacatta catgaacaat gagctctcca tcctgctgaa aaaccaagat gatcttgata    480

aagcaattga cattttagat agaagctcaa gcatgaaaag ccttaggata ttgctgttgt    540

cccaggacag aaaccataac agttcctctc cccactctga ggtgtccaga caggtgcgga    600

tcaaggcttc ccagtccgca ggggatataa atactatcta ccagcccccc gagcccagaa    660

gcaggcacct ctctgtcagc tcccagaacc ctggccgaag ctcacctccc cctggctatg    720

ttcctgagcg gcagcagcac attgcccggc agggtcccta caccagcatc aacagtgagg    780

gggagttcat cccagagacc agcgagcagt gcatgctgga tcccctgagc agtgcagaaa    840

attccttgtc tggaagctgc caatccttgg acaggtcagc agacagccca tccttccgga    900

aatcacgaat gtcccgtgcc cagagcttcc ctgacaacag acaggaatac tcagatcggg    960

aaactcagct ttatgacaaa ggggtcaaag gtggaaccta ccccggccgc taccacgtgt   1020

ctgtgcacca caaggactac agtgatggca agaacatt tccccgaata cggcgtcatc    1080

aaggcaactt gttcaccctg gtgccctcca ccgctccct gagcacaaat ggcgagaaca    1140

tgggtctggc tgtgcaatac ctggaccccc gtgggcgcct gcggagtgcg gacagcgaga    1200

atgccctctc tgtgcaggag aggaatgtgc caaccaagtg tgaggagctg tccctggcta    1260

ggaggagact gcccaggtgg tctcagacaa gctacggggg caaacagctg ggccctgggg   1320

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ggcactgggg cttgctccag attgtggtgg gagaatgctc tactaagaga ttgatggggt    1680

gctggggtgg aggggggaa gcctgnagcc caagagaccc tgttcctggn agaatgaatg    1740

gggaatattc ataaataatg tacacaaagt aactctttcc ttctgctctc cctgttagct    1800
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cccaagtgcc ccccatcaaa cctgggcgcc cg                              1832


<210>   21
<211>   1269
<212>   DNA
<213>   Homo sapiens

<400>   21
agcggccgcg gaggggcctg gagtgcggcg gcggcgggac ccggagcagg agcggcggca     60

gcagcgactg ggggcggcgg cggcgcgttg gaggcggcca tggcaaagca gtacgactcg    120

gtggagtgcc cttttttgtga tgaagtttcc aaatacgaga agctcgccaa gatcggccaa   180

ggcaccttcg gggaggtgtt caaggccagg caccgcaaga ccggccagaa ggtggctctg    240

aagaaggtgc tgatggaaaa cgagaaggag gggttcccca ttacagcctt gcgggagatc    300

aagatccttc agcttctaaa acacgagaat gtggtcaact tgattgagat ttgtcgaacc    360

aaagcttccc cctataaccg ctgcaagggt agtatatacc tggtgttcga cttctgcgag    420

catgaccttg ctgggctgtt gagcaatgtt ttggtcaagt tcacgctgtc tgagatcaag    480

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cccatgccct ccgacctcaa gggcatgctc tccacccacc tgacgtccat gttcgagtac    600

ttggcaccac cgcgccggaa gggcagccag atcacccagc agtccaccaa ccagagtcgc    660

aatcccgcca ccaccaacca gacggagttt gagcgcgtct tctgagggcc ggcgcttgcc    720

actagggctc ttgtgttttt tttcttctgc tatgtgactt gcatcgtgga gacagggcat    780

ttgagtttat atctctcatg catatttttat ttaatcccca ccctgggctc tgggagcagc    840

ccgctgagtg gactggagtg gagcattggc tgagagacca ggagggcact ggagctgtct    900

tgtccttgct ggttttctgg atggttccca gagggtttcc atggggtagg aggatgggct    960

cgcccaccag tgacttttttc taagagctcc cggcgtggtg gaagagggga caggtccctc   1020

acccacccac aatcctattc tcgggctgag aaccctgcgt ggggacaggg ctcgcctcag   1080

gaatgggctg tttttggcct aaccctcaga aacactgggg ctggcacaaa ctcttggttt   1140

cttcaacagg agaattttac tgtgtttctt ttggttccat tgtttggaga cattcctggg   1200

cacagtttgg tccgttagaa ttaaaagttg aattttttttt tttttwaat ttttttttttt  1260

yccccaaa                                                          1269


<210>   22
<211>   623
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<212> DNA
<213> Homo sapiens

<220>
<221> -
<222> (1)..(623)
<223> "n" can be any nucleotide 'a', 'c' , 'g' or 't'

<400> 22
agccctccca gtttccgcgc gcgtctttgg cagctggtca catggtgagg gtgggggtga   60

gggggcctct ctagcttgcg gcctgtgtct atggtcgggc cctctgcgtc cagctgctcc   120

ggaccgagct cgggtgtatg gggccgtagg aaccggctcc ggggccccga taacgggccg   180

cccccacagc accccgggct ggcgtgaggg tctcccttga tctgagaatg gctacctctc   240

gatatgagcc agtggctgaa attggtgtcg gtgcctatgg gacagtgtac aaggcccgtg   300

atccccacag tggccacttt gtgccctcaa gagtgtgaga gtccccaatg gaggaggagg   360

tggaggaggc cttcccatca gcacagttcg tgaggtggct ttactgaggc gactggaggc   420

ttttgagcat cccaatgttg tccggctgat ggacgtctgt gccacatccc gaactgaccg   480

ggagatcaag gtaaccctgg tgtttgagca tgtagaccag gacctaagga catatctgga   540

caaggcaccc ccaccaggct tgccagccga aacgatcaag gtgagtgggg ttggtaggca   600

ttganaggtg gattgggacc ttt   623

<210> 23
<211> 502
<212> DNA
<213> Homo sapiens

<400> 23
agccctccca gtttccgcgc gcgtctttgg cagctggtca catggtgagg gtgggggtga   60

gggggcctct ctagcttgcg gcctgtgtct atggtcgggc cctctgcgtc cagctgctcc   120

ggaccgagct cgggtgtatg gggccgtagg aaccggctcc ggggccccga taacgggccg   180

cccccacagc accccgggct ggcgtgaggg tctcccttga tctgagaatg gctacctctc   240

gatatgagcc agtggctgaa attggtgtcg gtgcctatgg gacagtgtac aaggcccgtg   300

atccccacag tggccacttt gtgccctcaa gagtgtgaga gtccccaccc acctctcctt   360

ttgaggcttc tccttctcct tcccatttct ctacactaag gggtatgttc cctcttgtcc   420

ctttccctac ctttatattt ggggtccttt tttatacagg aaaaacaaaa caaagaaata   480

aagtcgacgc ggccgcgaat tc   502

<210> 24
<211> 1148
<212> DNA
<213> Homo sapiens

<220>
<221> -
<222> (1)..(1148)
<223> "n" can be any nucleotide 'a', 'c' , 'g' or 't'

<400> 24
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catcatatga ggtggacagg aagcccagcc aagccatggg ggccgacccc tcccntggat      60

tcacttgcnt ttgagccaca caccctccag ccactaccca tagcagttat gggggtgtgt     120

cctgggaaga ctcctttctg ctccccaaaa ccccaaggcc tggctcgggg ccactggagc     180

cgcaggcggg acatatgtgt gaccggccct ctgcccctgg cagccccgcg ctgtgtactg     240

taaggacgtg ctggacatcg agcagttctc cactgtgaag ggcgtcaatc tggaccacac     300

agacgacgac ttctactcca agttctccac gggctctgtg tccatcccat ggcaaaacga     360

gatgatagaa acagaatgct ttaaggagct gaacgtgttt ggacctaatg gtaccctccc     420

gccagatctg aacagaaacc accctccgga accgcccaag aaagggctgc tccagagact     480

cttcaagcgg cagcatcaga acaattccaa gagttcgccc agctccaaga ccagttttaa     540

ccaccacata aactcaaacc atgtcagctc gaactccacc ggaagcagct agtttcggct     600

ctggcctcca agtccacagt ggaaccagcc cagacccttc tccttagaag tggaagtagt     660

ggagcccctg ctctggtggg gctgccaggg gagaccccgg gagccgggga aggaggccgt     720

ccatcccgtc gacgtagaac ctcgaggttt ctcaaagaaa tttccactca ggtctgtttt     780

ccgaggcggc cccggccggg gtggattgga tttgtctttg gtgaacattg caatagaaat     840

ccaattggat acgacaactt gcacgtattt taatagcgtc ataactagaa ctgaattttg     900

tctttatgat ttttaaagaa aagttttgta aatttctcta ctgtctcagt ttacattttg     960

tatatttgta tttaaatgaa agtgagactt tgagggtgta tattttctgt gcagccactg    1020

ttaagccatg tgttccaagg catttttagcg gggaggggt tatcaaaaaa aaaaaaatgt    1080

gactcaagac ttccagagcc tcaaatgaga aaatgtcttt attaaatgta gaaagtgatc    1140

catacttc                                                             1148
```

<210> 25
<211> 1679
<212> DNA

<213> Homo sapiens

<220>
<221> -
<222> (1)..(1679)
<223> "n" can be any nucleotide 'a', 'c' , 'g' or 't'

<400> 25
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ccaagattct ctgacctcag cgttccagga gcnccattca gcctttgact aggcaggtcg      60

gtcaacgtcc agccgggtcc aggcatccta ttgcatctta tgttccactc ctgaagagtg     120

ggcattttcc tgtgtcctcc cacacctgca ctctcccaag gctcttgtgg tcactctgag     180

atggcagatt ggggtccctg ttgtccttgg acagatgaga atgccgagag ctcgtatgcc     240

tnggccaagg gcacacagca aggccgggtg cccatgcggc tgtcccaggg acccactgac     300

cctgctgtcc ccctcaggcc acattaggat ctcagacctg ggcttggctg tgaagatccc     360

cgagggagac ctgatccgcg gccgggtggg cactgttggc tacatggctc cagaggtcct     420

gaacaaccag aggtacggcc tgagccccga ctactggggc cttggctgcc tcatctatga     480

gatgatcgag ggccagtcgc cgttccgcgg ccgcaaggag aaggtgaagc gggaggaggt     540

ggaccgccgg gtcctggaga cggaggaggt gtactcccac aagttctccg aggaggccaa     600

gtccatctgc aagatgctgc tcacgaaaga tgcgaagcag aggctgggct gccaggagga     660

gggggctgca gaggtcaaga gacacccctt cttcaggaac atgaacttca gcgcttaga      720

agccgggatg ttggaccctc ccttcgttcc agaccccgc gctgtgtact gtaaggacgt      780

gctggacatc gagcagttct ccactgtgaa gggcgtcaat ctggaccaca cagacgacga     840

cttctactcc aagttctcca cgggctctgt gtccatccca tggcaaaacg agatgataga     900

aacagaatgc tttaaggagc tgaacgtgtt tggacctaat ggtaccctcc cgccagatct     960

gaacagaaac caccctccgg aaccgcccaa gaaagggctg ctccagagac tcttcaagcg    1020

gcagcatcag aacaattcca agagttcgcc cagctccaag accagtttta accaccacat    1080

aaactcaaac catgtcagct cgaactccac cggaagcagc tagtttcggc tctggcctcc    1140

aagtccacag tggaaccagc ccagacccCtt ctccttagaa gtggaagtag tggagcccct    1200

gctctggtgg ggctgccagg ggagaccccg ggagccgggg aaggaggccg tccatcccgt    1260

cgacgtagaa cctcgaggtt tctcaaagaa atttccactc aggtctgttt ccgaggcgg     1320

ccccggccgg ggtggattgg atttgtcttt ggtgaacatt gcaatagaaa tccaattgga    1380

tacgacaact tgcacgtatt ttaatagcgt cataactaga actgaatttt gtctttatga    1440
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tttttaaaga aaagttttgt aaatttctct actgtctcag tttacatttt gtatatttgt    1500

atttaaatga aagtgagact ttgagggtgt atattttctg tgcagccact gttaagccat    1560

gtgttccaag gcattttagc gggggagggg ttatcaaaaa aaaaaaaatg tgactcaaga    1620

cttccagagc ctcaaatgag aaaatgtctt tattaaatgt agaaagtgat ccatacttc     1679
```

<210> 26
<211> 897
<212> DNA
<213> Homo sapiens

<220>
<221> -
<222> (1)..(897)
<223> "n" can be any nucleotide 'a', 'c' , 'g' or 't'

<400> 26
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ccaagattct ctgacctcag cgttccagga gcnccattca gcctttgact aggcaggtcg      60

gtcaacgtcc agccgggtcc aggcatccta ttgcatctta tgttccactc ctgaagagtg     120

ggcattttcc tgtgtcctcc cacacctgca ctctcccaag gctcttgtgg tcactctgag     180

atggcagatt ggggtccctg ttgtccttgg acagatgaga atgccgagag ctcgtatgcc     240

tnggccaagg gcacacagca aggccgggtg cccatgcggc tgtcccaggg acccactgac     300

cctgctgtcc ccctcaggcc acattaggat ctcagacctg ggcttggctg tgaagatccc     360

cgagggagac ctgatccgcg gccgggtggg cactgttggc tacatggctc cagaggtcct     420

gaacaaccag aggtacggcc tgagccccga ctactggggc cttggctgcc tcatctatga     480

gatgatcgag ggccagtcgc cgttccgcgg ccgcaaggag aaggtgaagc gggaggaggt     540

ggaccgccgg gtcctggaga cggaggaggt gtactcccac aagttctccg aggaggccaa     600

gtccatctgc aagatggtga gctcctggtg gccagatgcc accctcaagc tggtggctcc     660

cctccctggg cctggcccca gtctgtcccc agaacagcaa acaggctgaa gggacagggg     720

tctgagcatg ggggtggggg ttgcagccca ccaagctaga gttgagggca ctccttgctg     780

aggactgggg tggtcagcgg agacttccag gagaaagcct gggtggggca gggacaccca     840

gtaaccaagg gaagaggggt gaggggaaca gtgtggaaca ccctcacatc cagcctg       897
```

<210> 27
<211> 1224
<212> DNA
<213> Homo sapiens

<400> 27

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tgccgccgcg acccttggcg cctgcccctg caacgggagc cccactgcag gccccaccat      60

ggcgccgttc ctgcgcatcg ccttcaactc ctatgagctg ggctccctgc aggccgagga     120

cgaggcgaac cagcccttct gtgccgtgaa gatgaaggag gcgctcagca cagagcgtgg     180

gaaaacactg gtgcagaaga agccgaccat gtatcctgag tggaagtcga cgttcgatgc     240

ccacatctat gaggggcgcg tcatccagat tgtgctaatg cgggcagcag aggagccagt     300

gtctgaggtg accgtgggtg tgtcggtgct ggccgagcgc tgcaagaaga caatggcaa     360

ggctgagttc tggctggacc tgcagcctca ggccaaggtg ttgatgtctg ttcagtattt     420

cctggaggac gtggattgca aacagtctat gcgcagtgag gacgaggcca gttcccaac      480

gatgaaccgc cgcggagcca tcaaacaggc caaaatccac tacatcaaga accatgagtt     540

tatcgccacc ttctttgggc aacccacctt ctgttctgtg tgcaaagact ttgtctgggg     600

cctcaacaag caaggctaca aatgcaggca atgtaacgct gccatccaca gaaatgcat      660

cgacaagatc atcggcagat gcactggcac cgcggccaac agccgggaca ctatattcca     720

gaaagaacgc ttcaacatcg acatgccgca ccgcttcaag gttcacaact acatgagccc     780

caccttctgt gaccactgcg gcagcctgct cctgcccgct ccccacgata agcaccagtg     840

ggactgtggt gacttctgct gctggccccg cccctgcccc cagagcgtcc ttggctgccg     900

tctggccggg ctctcatggt acttcctctg tgaactgtgt gtgaatctgc ttttcctctg     960

ccttcggagg gaaattgtaa atcctgtgtt tcattacttg aatgtagtta tctattgaaa    1020

atatatatta tatacataga catatatata tatataatag ctgtatata ttgctcagta    1080

gagaaaaacc atgggggact ggtgatatgt tgatcttttt caaaaaaata tatatatgac    1140

aaaaaaaaaa aaaaaggag cacaagctgt ttgaaccacc aggtttattt gtgtgtctaa    1200

ataaacacca aatagtacca aaaa                                          1224
```

<210> 28
<211> 1424
<212> DNA
<213> Homo sapiens

<400> 28

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tttttgcgt atgtattatg atgtatgtaa aaatacataa tctttccata tgcattatga      60

tatatataaa actaaggtaa caagttgtga ggagtgggta ggttggcttg atagtgggt     120

aggtagggtt ggaggaggca aatgatatgg tggaacaagg accttgaaat caatccaaaa     180

cccaggtttt cctaggaagg ccacccggaa cccatggtaa gccaactgtt gcgcagggat     240
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agtgcctcag caggagactt ggcagaaggc agacagaagg aagatgggaa cactggtagt   300

cctggcagcg ttgaggaggc tccagcagag atccagtgct aagggcccta gaggggctgg   360

tggcatcccc tcaatcttgg tcctctctcc ccagagttgt gtgggacccc agggtatcta   420

gcgccagaga tccttaaatg ctccatggat gaaacccacc caggctatgg caaggaggtc   480

gacctgtgag ttcctggtct ccccctccct cccgtgcttg ctgtcctttg ctgggtctgc   540

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acgcatgatc atggagggcc agtaccagtt cagttccccc gagtgggatg accgttccag   720

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aagggttttg atcattccag ctcctctggg ctctggcctc aggcccacta atgatcctgc   1260

taccctcttg aagaccagcc cggtacctct ctccccactg gccaggactc tgagatcaga   1320

gctggggtgg aagggagcca ttctgaacgc cacgcctggc ccggtcagtg ctgcatgcac   1380

tgcatatgaa ataaaatctg ctacacgcca gggaaaatga ggta   1424

<210>   29
<211>   2027
<212>   DNA
<213>   Homo sapiens

<400>   29
gcggccgcgg agtatcctgg agctgcagac agtgcgggcc tgcgcccagt cccggctgtc   60

ctcgccgcga cccctcctca gccctgggcg cgcgcacgct ggggccccgc ggggctggcc   120

gcctagcgag cctgccggtc gaccccagcc agcgcagcga cggggcgctg cctggcccag   180

gcgcacacgg aagtgcgctt ctctgaagta gctttggaaa gtagagaaga aaatccagtt   240

tgcttcttgg agaacactgg acagctgaat aaatgcagta tctaaatata aagaggact   300

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gcaatgccat ggctttctgt gctaaaatga ggagctccaa gaagactgag gtgaacctgg    360

aggcccctga gccaggggtg gaagtgatct tctatctgtc ggacagggag cccctccggc    420

tgggcagtgg agagtacaca gcagaggaac tgtgcatcag ggctgcacag gcatgccgta    480

tctctcctct ttgtcacaac ctctttgccc tgtatgacga gaacaccaag ctctggtatg    540

ctccaaatcg caccatcacc gttgatgaca agatgtccct ccggctccac taccggatga    600

ggttctattt caccaattgg catggaacca acgacaatga gcagtcagtg tggcgtcatt    660

ctccaaagaa gcagaaaaat ggctacgaga aaaaaaagat tccagatgca acccctctcc    720

ttgatgccag ctcactggag tatctgtttg ctcagggaca gtatgatttg gtgaaatgcc    780

tggctcctat tcgagacccc aagaccgagc aggatggaca tgatattgag aacgagtgtc    840

tagggatggc tgtcctggcc atctcacact atgccatgat gaagaagatg cagttgccag    900

aactgcccaa ggacatcagc tacaagcgat atattccaga aacattgaat aagtccatca    960

gacagaggaa ccttctcacc aggatgcgga taaataatgt tttcaaggat ttcctaaagg   1020

aatttaacaa caagaccatt tgtgacagca gcgtgtccac gcatgacctg aaggtgaaat   1080

acttggctac cttggaaact ttgacaaaac attacggtgc tgaaatattt gagacttcca   1140

tgttactgat ttcatcagaa aatgagatga attggtttca ttcgaatgac ggtggaaacg   1200

ttctctacta cgaagtgatg gtgactggga atcttggaat ccagtggagg cataaaccaa   1260

atgttgtttc tgttgaaaag gaaaaaaata aactgaagcg gaaaaaactg gaaaataaag   1320

acaagaagga tgaggagaaa aacaagatcc gggaagagtg gaacaatttt tcattcttcc   1380

ctgaaatcac tcacattgta ataaaggagt ctgtggtcag cattaacaag caggacaaca   1440

agaaaatgga actgaagctc tcttcccacg aggaggcctt gtcctttgtg tccctggtag   1500

atggctactt ccggctcaca gcagatgccc atcattacct ctgcaccgac gtggcccccc   1560

cgttgatcgt ccacaacata cagaatggct gtcatggtcc aatctgtaca gaatacgcca   1620

tcaataaatt gcggcaagaa ggaagcgagg aggggatgta cgtgctgagg tggagctgca   1680

ccgactttga caacatcctc atgaccgtca cctgctttga gaagtctgag caggtgcagg   1740

gtgcccagaa gcagttcaag aactttcaga tcgaggtgca gaagggccgc tacagtctgc   1800

acggttcgga ccgcagcttc cccagcttgg agacctcat gagccacctc aagaagcaga   1860

tcctgcgcac ggataacatc agcttcatgc taaaacgctg ctgccagccc aagccccgag   1920

gttcgtctcc ctgtgccaga gccaggctgt atcccatcag taatgtgctg agacccagat   1980
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cgaccaaaac acgctgactg acttaaacaa agtggaccct cccccca   2027

<210> 30
<211> 1609
<212> DNA
<213> Homo sapiens

<400> 30
gccgcgctgg tggcggcggc gcgtcgttgc agttgcgcca tctgtcagga gcggagccgg   60

cgaggagggg gctgccgcgg gcgaggagga ggggtcgccg cgagccgaag gccttcgaga   120

cccgcccgcc gcccggcggc gagagtagag gcgaggttgt tgtgcgagcg gcgcgtcctc   180

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gccgccgccc gcgccgcacc gcccgcggcc gccgcccgcg ccagggaggg attcggccgc   300

cgggccgggg acaccccggc gccgccccct cggtgctctc ggaaggccca ccggctcccg   360

ggcccgccgg ggaccccccg gagccgcctc ggccgcgccg gaggagggcg gggagaggac   420

catgtgagtg ggctccggag cctcagcgcc gcgcagtttt tttgaagaag caggatgctg   480

atctaaacgt ggaaaaagac cagtcctgcc tctgttgtag aagacatgtg gtgtatataa   540

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ataaagaagc aacaaaactg acggaggaga gggacggcag cctgaaccag agctctgggt   660

accgctatgg cacagacccc acccctcagc actaccccag cttcggtgtg acctccatcc   720

ccaactacaa caacttccac gcagccgggg gccaaggact caccgtcttt ggaggtgtga   780

actcttcgtc tcatacgggg accttgcgta cgagaggagg aacaggagtg acactctttg   840

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gagagacagg ttacattccc agcaattatg tggctccagt tgactctatc caggcagaag   1020

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tacaacatta ctcagagaga gctgcaggtc tctgctgccg cctagtagtt ccctgtcaca   1320

aagggatgcc aaggcttacc gatctgtctg tcaaaaccaa agatgtctgg gaaatccctc   1380

gagaatccct gcagttgatc aagagactgg gaaatgggca gtttggggaa gtatggatgg   1440

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gtatgctgag actcaattac tctcttatta gcttccccgt ttggaagatc ccaaacacca    1500

aagatggaag gtgaaaataa agactgcgtg accgggaaga aagtttgaat tactaatagt    1560

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<210>  31
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<212>  DNA
<213>  Homo sapiens

<220>
<221>  -
<222>  (1)..(1995)
<223>  "n" can be any nucleotide 'a', 'c' , 'g' or 't'


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tcccgcccgg gcgcgccgcg cttctcccag cgcaccgagg accgcccggg cgcacacaaa     240

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cgggccgggg acaccccggc gccgccccct cggtgctctc ggaaggccca ccggctcccg     360

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atcatggctc actacaatct ctgccttcct gcctcaaggg ttcttccttg agcacctcag     660

cctcccaagt agctgggacc acaggaattt agataatggg ctgtgtgcaa tgtaaggata     720

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gctatggcac agaccccacc cctcagcact accccagctt cggtgtgacc tccatcccca     840

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cccttttatga ctatgaagca cggacagaag atgacctgag ttttcacaaa ggagaaaaat    1020

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caagaggtac ctttcttatc cgcgagagtg aaaccaccaa aggtgcctat tcactttcta   1260

tccgtgattg ggatgatatg aaaggagacc atgtcaaaca ttataaaatt cgcaaacttg   1320

acaatggtgg atactacatt accacccggg cccagtttga aacacttcag cagcttgtac   1380

aacattactc agagagagct gcaggtctct gctgccgcct agtagttccc tgtcacaaag   1440

ggatgccaag gcttaccgat ctgtctgtca aaaccaaaga tgtctgggaa atccctcgag   1500

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gggcaacacc tctcctgtct ccagctcaca gtgccttaag gggttgttta ggggagagaa   1800

atggaagttt cctacttgct actttctag tttctgcctg ggtcaagtat tcccattagg   1860

aaccaccagt tatgtgctcg ttaatgaaaa catttttttaa aacagactaa ccttgcgttt   1920

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<211> 2590
<212> DNA
<213> Homo sapiens

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ctgactgagc ctgaggcccg atactaccta cggcaaattg tgcttggctg ccagtacctg   240

caccgaaacc gagttattca tcgagacctc aagctgggca accttttcct gaatgaagat   300

ctggaggtga aaataggga ttttggactg gcaaccaaag tcgaatatga cggggagagg   360

aagaagaccc tgtgtgggac tcctaattac atagctcccg aggtgctgag caagaaaggg   420

cacagtttcg aggtggatgt gtggtccatt gggtgtatca tgtataccctt gttagtgggc   480

aaaccacctt ttgagacttc ttgcctaaaa gagacctacc tccggatcaa gaagaatgaa   540

tacagtattc ccaagcacat caaccccgtg gccgcctccc tcatccagaa gatgcttcag   600

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acagatccca ctgcccgccc aaccattaac gagctgctta atgacgagtt ctttacttct    660

ggctatatcc ctgcccgtct ccccatcacc tgcctgacca ttccaccaag gttttcgatt    720

gctcccagca gcctggaccc cagcaaccgg aagcccctca cagtcctcaa taaaggcttg    780

gagaacccc tgcctgagcg tccccgggaa aaagaagaac cagtggttcg agagacaggt    840

gaggtggtcg actgccacct cagtgacatg ctgcagcagc tgcacagtgt caatgcctcc    900

aagccctcgg agcgtgggct ggtcaggcaa gaggaggctg aggatcctgc ctgcatcccc    960

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aattcggaac tgtcctttcc ttggctttat gcacattaaa cagatgtgaa tattcttttt   1860

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cccaggctgc ccagcctctg ccagtcttgt gggggaaagg gggtgacagt gtctctctgt   1980

ggaccaggct ggagtgcagt ggcatgatcc tggctcactg cagcctcgaa ctcctgggct   2040

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gccagcacgg agaccatctg tgtggcatcc agcccacctc acctccctgt ggccccaggg   2340
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satggctcct ggcctctgag tctggcgggt agtagggcag gaagaggctc tcagaggcgc   2400

agctcctcat ggctcggtgc gtgtggagga gcagccgtgg ggagcggttt gtgagtactg   2460

gacgaagcca tcaggacttg gcgagtgcct gtcgcacctc aactgggagc ttcttgtatg   2520

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<212> DNA
<213> Homo sapiens

<220>
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<223> "n" can be any nucleotide 'a', 'c' , 'g' or 't'

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acagtgggtg gctaggacag tgctggctgc aggggtctg ggagcgtkgg cctcacagtg   240

gccttctcta tcctctgcaa caccctccag ccgaattctc aacatacctc aacttctgcc   300

gctccctgcg gtttgacgac aagcccgact actcttacct acgtcagctc ttccgcaacc   360

tcttccaccg gcagggcttc tcctatgact acgtctttga ctggaacatg ctgaaattcg   420

gggcttcctc gagccaggct cagccccgtg acagccccat gacagcgaag ggacctttct   480

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ccaccctgct agatggttag gaccaaggct ctgttctcct ggaagccaag gtcggcacat   1020

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<211> 940
<212> DNA
<213> Homo sapiens

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ggaaggccat ggctctgttg cctccttttc ttgcctctca cagattggaa gtatctaggg   . 180

acagtgggtg gctaggacag tgctggctgc agggggtctg ggagcgtkgg cctcacagtg   240

gccttctcta tcctctgcaa caccctccag ccgaattctc aacatacctc aacttctgcc   300

gctccctgcg gtttgacgac aagcccgact actcttacct acgtcagctc ttccgcaacc   360

tcttccaccg gcagggcttc tcctatgact acgtctttga ctggaacatg ctgaaattcg   420

gggcttcctc gagccaggct cagccccgtg acagccccat gacagcgaag ggacctttct   480

gtccccgccc ctgtccctgt gctgggccca cgtactcacc cacgtactgg taaggatcct   540

ctgaggtctg gcttttccaa aatttgccac ttgaccagtg agcgcaggag gccatggtgg   600

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ctgcccacaa ggggcctggt gggaacgggt cccaggacag actcatagct agaccccgtt   720

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cactaaggag taacacagag gtcaggcaga gaatggggg   940

<210> 35
<211> 951
<212> DNA
<213> Homo sapiens

<220>
<221> -
<222> (1)..(951)
<223> "n" can be any nucleotide 'a', 'c' , 'g' or 't'

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acagtgggtg gctaggacag tgctggctgc aggggggtctg ggagcgtkgg cctcacagtg   240

gccttctcta tcctctgcaa caccctccag ccgaattctc aacatacctc aacttctgcc   300

gctccctgcg gtttgacgac aagcccgact actcttacct acgtcagctc ttccgcaacc   360

tcttccaccg gcagggcttc tcctatgact acgtctttga ctggaacatg ctgaaattcg   420

gcggccccct tcctgccagc cccctgccct tccctgtgga cggccccagg atgaactagg   480

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agtgaggaga gcccccattg gaccagtgtt tgcttagtgt cttcactgta ttttctttaa   900

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<210>   36
<211>   2063
<212>   DNA
<213>   Homo sapiens

<220>
<221>   -
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<223>   "n" can be any nucleotide 'a', 'c' , 'g' or 't'

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actcgaaggc ccaccgcagc cggactaagt cgtccaagga ccgccttcg gcctacaagg   120

aaccgcccaa ggcctaccgg gaggacaaga ccgagcctaa ggcctacagg cggcggcggt   180

ccctcagccc actgggaggc cgggacgaca gcccggtgtc ccacagggcc tctcagagcc   240

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tgccgcgctc cccgagcccc tacagtcgcc gccgctcccc cagctacagc cgccacagct   360

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cctacgagcg gggcggcgac gtgtcccta gtccctacag cagcagcagc tggcgccgct    420

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aagcaactaa ggctgctgag gctgctgcca aggctgcaaa agcttcaaac acttctacac    720

ctaccaaggg gaacacggaa actagtgcca gtgcatcaca aacaaaccat gtgaaggatg    780

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ataaagccac caagaaagca gtcatagttg gaaaggagag taaatctgct gctacaaagg    960

aggaatcagt atctcttaaa gagaaaacca aaccacttac accaagcata ggagccaagg   1020

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tgtattaatt tcctggggta ttgtatatgt taaagatact ttctgttatt aagagattga   1560

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attagtaatg ggcaagctgc tgtttccttt gcttttagct ccattttctc ccataaacaa   1680

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gcggggaaca ctggtgcctt tttttttttt ttttttaac ttcttaacca agggacagtg   1860

aagactttaa gttagatctg attttagaat tgcagttgag gtagtgccta gtgtgtgaat   1920

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gggaggccca ggtgggagaa tcacttgagt ccaggagttt gataccagcc tgagcaacac   2040

agggaacccc atctctacca aaa                                           2063
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<210> 37
<211> 1393
<212> DNA
<213> Homo sapiens

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cggcggcgcc gaggggagga gagcggccca tggacccgcg gggcccggcg ccccagactc   180

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cgcaacgaga gcgccctgag cgtggaaacg ctgctcgacg tgctcgtctg cctgtacacc   480

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aaagtaattg gaagaggtgc ttttggtgag gttgctgttg tcaaaatgaa gaatactgaa   660

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cactacgcct ttcaggacga gaaccacctg tacttagtca tggattacta tgtgggtggt   840

gatttactga ccctgctcag caaatttgaa gacaagcttc cggaagatat ggcgaggttc   900

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ggggctgttt ttc   1393

<210> 38
<211> 1244
<212> DNA
<213> Homo sapiens

<400> 38
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ccctctcccc ttctttctcc cgcgcttcct tgtactgtgc attcctcatc aacgatggct     240

tctcggactc cacgaaactg cgctgtactg aagggcgaag tggatctgac cgcactggcc     300

aaagagcttc gagcagtgga agatgtacgg ccacctcaca aagtaacgga ctactcctca     360
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atgaccccat ccaaggaggg cactctaatc gtccgccaga ctcagtccgc tagtagcaca     600

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atttctccat ctagcggaac aacagtgaca tctgtggtgg gattttcctg tgatgggatg     720

agaccagaag ccataaggca agatcctacc cggaaaggct cagtggtcaa tgtgaatcct     780

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gaagttgaga agaagcaggg atggacaacc gtaggggatt tggaaggatg tgtacattat   1140

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ctccaaaata aatcaaggct gcaatgcagc tggtgctgtt cagattctac catcaggtgc    2040

tataagtgtt tgggattgag catcatactg gaaagcaaac acctttcctc cagctccaga    2100
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tggggtgggg tgggttaagg ggtcccattt tgtttctttg gatttggggt ggggtcctg      2460

gccaagaact cagtcatttt tctgtgtacc aggttgccta aatcatgtgc agatggttct      2520

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tgtataatgg ccagaacttt gtcgtgtgac agtattagca ctgcctcagt taaaggttta      2640

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aagaaaaaaa ttcaaaccac atgtttattt ttttttgcc tacctcattg ttcttaatgc      2760

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taataccaaa acgaccagat tgaagtttga cttttattgt cacaaatcag caggcacaag      2880

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gtgaaagaca cagttactag ataacttttt ttgtgggtgg ggcttgggag atggggtggg    2040

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tcagtcattt ttctgtgtac caggttgcct aaatcatgtg cagatggttc taaaaaaaaa    2160

aaaaaaaaaa aaaaaggaa aaaaaaaag aaaagaaaa cgtgtgcatt ttgtataatg    2220

gccagaactt tgtcgtgtga cagtattagc actgcctcag ttaaaggttt aatttttgtt    2280

taaacctaga cgtgcaacaa aagttttacc acagtctgca cttgcagaag aaagaaaaaa    2340

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cctcctcctt ctcagctgct ctgttctcga cagcttcggg gaactgattc cgcagccttc    180

caatgaagtc aatctactgg attcaaaaac aattcaaggg gagctgggct ggatctctta    240

tccatcacat gggtgggaag agatcagtgg tgtggatgaa cattacacac ccatcaggac    300

ttaccaggtg tgcaatgtca tggaccacag tcaaaacaat tggctgagaa caaactgggt    360

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tagcattcca ttggttttag gaacttgcaa ggagacattc aacctgtact acatggagtc    480

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gaatctggct atgtttccag acacggtacc catggactcc agtccctgg tggaggttag     780

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tttaaaactt ccaggtctca ggacttatgt tgacccacat acatatgaag accctaccca    1920

agctgttcat gagtttgcca aggaattgga tgccaccaac atatccattg ataaagttgt    1980

tggagcagtc ctgacttctg aacagctcca tgatgcagaa nggtttagtc tggctggttt    2040

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<210> 46
<211> 1479
<212> DNA
<213> Homo sapiens

<220>
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<223> "n" can be any nucleotide 'a', 'c' , 'g' or 't'

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ggggttgggt tgctgtagta aaactaaaaa atgcagataa agtgtttgcc atgaaaatat     180

tgaataaatg ggaaatgctg aaaagagctg agacagcatg ttttcgtgaa gaaagggatg     240

tattagtgaa tggagacaat aaatggatta caaccttgca ctatgctttc caggatgaca     300

ataacttata cctggttatg gattattatg ttggtgggga tttgcttact ctactcagca     360

aatttgaaga tagattgcct gaagatatgg ctagatttta cttggctgag atggtgatag     420

caattgactc agttcatcag ctacattatg tacacagaga cattaaacct gacaatatac     480

tgatggatat gaatggacat attcggttag cagattttgg ttcttgtctg aagctgatgg     540

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<211> 1223
<212> DNA
<213> Homo sapiens

<400> 47
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<211> 1154
<212> DNA
<213> Homo sapiens

<400> 48
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<213>    Homo sapiens

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ttctccaagt tgggggctca gaggggagtc atcatgagcg atgttaccat tgtgaaagaa        180

ggttgggttc agaagagggg agaatatata aaaaactgga ggccaagata cttccttttg        240

aagacagatg gctcattcat aggatataaa gagaaacctc aagatgtgga tttaccttat        300

cccctcaaca acttttcagt ggcaaaatgc cagttaatga aaacagaacg accaaagcca        360

aacacattta taatcagatg tctccagtgg actactgtta tagagagaac atttcatgta        420

gatactccag aggaaaggga agaatggaca gaagctatcc aggctgtagc agacagactg        480

cagaggcaag aagaggagag aatgaattgt agtccaactt cacaaattga taatatagga        540

gaggaagaga tggatgcctc tacaacccat cataaaagaa agacaatgaa tgattttgac        600

tatttgaaac tactaggtaa aggcactttt gggaaagtta ttttggttcg agagaaggca        660

agtggaaaat actatgctat gaagattctg aagaaagaag tcattattgc aaaggtaact        720

gatttattaa agttgattac taaattttg tttgcagtgt gcatgtgttt gtgggctcat        780
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tgctacagta attttgtgt attaatattt gtaattttta aagtttcag acattcataa          900

tatttgtata ttatatacta aagctattct cttaaggaaa tagaaatgtt tatgtttgca        960

tgtttggg                                                                 968


<210>   66
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<213>   Homo sapiens

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atttaacagc tcgcagtttc cccttggaaa cctggaaaag ataagccagc tgctgtctaa        180

gagtgctcag tgtccactga gagtacacta tctatcatca caatatggtg atgagaggtg        240

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acgtttctat ggtgcagaaa ttgtctctgc cttggactat ctacattccg gaaagattgt        420

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actctcttca gatgcaaaat cattgctttc agggctcttg ataaaggatc caaataaacg        780

ccttggtgga ggaccagatg atgcaaaaga aattatgaga cacagtttct ctctggagt        840

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tgagacagat actagatatt ttgatgaaga atttacagct cagactatta caataacacc        960

acctgaaaaa tatgatgagg atggtatgga ctgcatggac aatgagaggc ggccgcattt       1020

ccctcaattt tcctactctg caagtggacg agaataagtc tctttcattc tgctacttca       1080

ctgtcatctt caatttatta ctgaaaatga ttcctggaca tcaccagtcc tagctcttac       1140

acatagcagg ggcaccttcc gacatcccag accagccaag ggtcctcacc cctcgccacc       1200

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caattatcat cttttgatct tttagttttt ccctcagtga aggctaaatg agatacactg   1440

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gtttataaat tcagaacaag caattgtgga agggtggtgg cgtgcatatg taaagcacat   1560

cagatccgtg cgtgaagtag gcatatatca ctaagctgtg gctggaattg attaggaagc   1620

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ttaaattcct ggtggatact gtagaagcag cccatatcac atgtggatgt cgagacttca   1740

cgggcaatca tgagcaagtg aacactgttc taccaagaac tgaaggcata tgcacagtca   1800

aggtcactta aagggtctta tgaaacaatt tgagccagag agcatctttc ccctgtgctt   1860

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ataatgatac tgcttttcac caaaatttct acaccaaggt aaacaggtgt ttgccttatt   1980

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gtccttttat gattttgttt atattgcagt agtatttatt ttttagtgat gagaattgta   2100

tgtcatgtta gcaaacgcag ctccaactta tataaaatag acttactgca gttacttttg   2160

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aaaaatgata aggctctgaa atggaatata ttggttagaa tttggctttg ggagaagaga   2280

tgctgccatt taacccccttg gtactgaaaa tgagaaaatc cccaactatg catgccaagg   2340

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acctggcaac                                                          2410


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<212>   DNA
<213>   Homo sapiens

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tccgcccect tcccgcctcc ccgtatataa gacttcgccg agcactctca ctcgcacaag    180

tggaccgggg tgttgggtgc tagtcggcac cagaggcaag ggtgcgagga ccacggccgg    240

ctcggacgtg tgaccgcgcc tagggggtgg cagcgggcag tgcggggcgg caaggcgacc    300
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atggagcttt tgcggactat cacctaccag ccagccgcca gcaccaaaat gtgcgagcag      360

gcgctgggca agggttgcgg agggaactcg aagaagaagc ggccgccgca gcccccgag      420

gaatcgcagc cacctcagtc ccaggcgcaa gtgcccccgg cggcccctca ccaccatcac      480

caccattcgc actcggggcc ggagatctcg cggattatcg tcgaccccac gactgggaag      540

cgctactgcc ggggcaaagt gctgggaaag ggtggctttg caaaatgtta cgagatgaca      600

gatttgacaa ataacaaagt ctacgccgca aaaattattc ctcacagcag agtagctaaa      660

cctcatcaaa gggaaaaggt gtgtatgact cttgagtaaa gtattttctt tgtgtgcaag      720

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tgactggaag ctaataag                                                    798


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<212>   DNA
<213>   Homo sapiens

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tccgcccccct tcccgcctcc ccgtatataa gacttcgccg agcactctca ctcgcacaag      180

tggaccgggg tgttgggtgc tagtcggcac cagaggcaag ggtgcgagga ccacggccgg      240

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atggagcttt tgcggactat cacctaccag ccagccgcca gcaccaaaat gtgcgagcag      360

gcgctgggca agggttgcgg agggaactcg aagaagaagc ggccgccgca gcccccgag      420

gaatcgcagc cacctcagtc ccaggcgcaa gtgcccccgg cggcccctca ccaccatcac      480

caccattcgc actcggggcc ggagatctcg cggattatcg tcgaccccac gactgggaag      540

cgctactgcc ggggcaaagt gctgggaaag ggtggctttg caaaatgtta cgagatgaca      600

gatttgacaa ataacaaagt ctacgccgca aaaattattc ctcacagcag agtagctaaa      660

cctcatcaaa gggaaaagat tgacaaagaa atagagcttc acagaattct tcatcataag      720

catgtagtgc agttttacca ctacttcgag gacaaagaaa catttacat tctcttggaa      780

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<212> DNA
<213> Homo sapiens

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cctcatcaaa gggaaaagat tgacaaagaa atagagcttc acagaattct tcatcataag       720

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tactgcagta gaaggctaca gggaagccaa aagaatgatc tagagtatgt tgaagaagat       840

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caggctaagg catacagttc ttgactttgg acaatccaag agtgaaccag aatgcagttt       960

tccttgagat acctgtttta aaaggttttt cagacaattt gcagaaaagg tgcattgatt      1020

cttaaattct ctctgttgag agcatttcag ccagaggact ttggaactgt gaatatactt      1080

cctgaagggg agggagaagg gaggaagctc ccatgttgtt taaaggctgt aattggagca      1140

gcttttggct gcgtaactgt gaactatggc catatataat ttttttttcat taattttttga      1200

agatacttgt ggctggaaaa gtgcattcct tgttaataaa ctttttattt attacagccc      1260

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<210> 70
<211> 538
<212> DNA
<213> Homo sapiens

<220>
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tgacaataag cgctacctct tcatccagaa actgggggag ggtgggttca gctatgtgga   240

cctagtggaa gggttacatg atggacactt ctacgccctg aagcgaatcc tgtgtcacga   300

gcagcaggac cgggaggagg cccagcgaga agccgacatg catcgcctct tcaatcaccc   360

caacatcctt cgcctcgtgg cttactgtct gagggaacgg ggtgctaagc atgaggcctg   420

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<212> DNA
<213> Homo sapiens

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ggcgtcagtg gctgcgcctc catgcctgcg cgcggggcgg gacgctgatg gagcgcgcca   180

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tggacatagt gataaaggtt tcggttgctg actggaaagt tatggcattc agtaagaagg       1140

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gaaatggatc atatatatta caactaactt cttcaactat ggacttttta agcctaatga      3060

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gttttatttta taaaaattct gaaatcaatc catttgggtt ggtggtgtac agaacacact      3240

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ttaaaaaa                                                                3308


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<213>   Homo sapiens

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ggagagcgtc gggcgggagg cggtggtcct gggagcggcc ccggcgcccg aagccgcccc       180

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aacgctgagc tctgggagcc actgcctgag ggcaggccgc ggccggcggg aacctcttct       540

gccgtctcag cctgggcgtc gctgaagctg tgtctgcggg gaggcagcgg aaggcggcag       600
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cctccagccc caccacgagc ttcttctctt ggagaaatag atgaatcttc tgaattaaga 2340

gttttggata taccaggaca ggcaagccat tttaaacctt gcataattcc tcttcactga 2400

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ttgtatcaga tccagaagat attacagatt gcccaaggac tccagatact ccaaataatg      720

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caaaacctgt gataagtcct cttgaacttc ggatggaaga attaaggcat cattttagga     1020

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tcgtgtagct ggaagacacc aacttcctga caggagcttt atttcatttg ggatttcaag     180

tttacagatg gtatcttctc aaaagttgga aaaacctata gagatgggca gtagcgaacc     240

ccttcccatc gcagatggtg acaggaggag gaagaagaag cggagggggcc gggccactga     300

ctccttgcca ggaaagtttg aagatatgta caagctgacc tctgaattgc ttggagaggg     360

agcctatgcc aaagttcaag gtgccgtgag cctacagaat ggcaaagagt atgccgtcaa     420

aatcatcgag aaacaagcag ggcacagtcg gagtagggtg tttcgagagg tggagacgct     480

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aaggttttac ttggtctttg agaaattgca aggaggtact taccgttgag tatgtgtgtg     600

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cgagtcaagc taataaaaag gatgaaggac ttaaaaactg cccttgattt gggagaaggg     720

aggccggagg gaaggatgat aattagcatt ttgcagagct tagaatgtca cctgtgtggg     780

tattttataa atgccttttc attataatag gagtcatata tagatacatt tagtcatcga     840

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gggacacaga cccaggataa aggggaagcc tgagaatgtg ccatccttca gatggaaaga    1020

tgccatcacc cacacacata atcactgggg tgtatactta agttgctttt ctgacataat    1080

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tcagataagt ggaactattg agttacataa agaaaataga tttgcatttg tcaggcagac    1320

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tcgtgtagct ggaagacacc aacttcctga caggagcttt atttcatttg ggatttcaag   180

tttacagatg gtatcttctc aaaagttgga aaaacctata gagatgggca gtagcgaacc   240

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ctccttgcca ggaaagtttg aagatatgta caagctgacc tctgaattgc ttggagaggg   360

agcctatgcc aaagttcaag gtgccgtgag cctacagaat ggcaaagagt atgccgtcaa   420

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<213> Homo sapiens

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aaaaggaaag caatcacttc tcactttgca taattgcctg cagcaggaac atctcttcac   1140

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aactattgag ttacataaag aaaatagatt tgcatttgtc aggcagacgt ttatacaaca   1980

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aaaa                                                                 2044


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aaattttac gacaattgaa gcatcctaat actattgagt acaaaggctg ttacttgaaa    480

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<213> Homo sapiens

<400> 79
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accagcgaaa tcggaaaaga aaagctgaac catatgaaac tagccaaggg aaaggcactc    360

ctaggggaca taaaattagt gattactttg agacagcccc tctatggttt agatggcagt    420

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gaaaaaatat ctgcactaga aaacagtaag aattctgact tagagaagaa ggagggaaga      720

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tgcttacaat ttggaaaagt gtggccgggt gcggtggctc acgcctgtaa tcccagcact     1380

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cgcttgtggt cccagctgct ggggaggctg aagtaggagg atcatttatg cttgggaggt     1560

cgaggctgca gtgagtcatg attgtatgac tgcactccag cctgggtgac agagcaagac     1620

cctgtttcaa aaagaaaaac cctgggaaaa gtgaagtatg gctgtaagtc tcatggttca     1680

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ctgcaagcca ggccatccct gggcgccaca gacgagctcc gagccaggtc aggcttcgga     1860

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tctagctagg cccaagacct agttacccag acagtgagaa gccctggaa ggcagaaaag      1980

ttgggagcat ggcagacagg gaagggaaac attttcaggg aaaagacatg tatcacatgt     2040

cttcagaagc aagtcaggtt tcatgtaacc gagtgtcctc ttgcgtgtcc aaaagtagcc     2100

cagggctgta gcacaggctt cacagtgatt ttgtgttcag ccgtgagtca cactacatgc     2160

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gcaatctcgg gaaa                                                       2234


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<213>   Homo sapiens

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tacagcccgg gcaattcagt ttctacatca ggacagcccc agcctcatcc atggagacat      180

caagagttcc aacgtccttc tggatgagag gctgacaccc aagctgggag actttggcct      240

ggcccggttc agccgctttg ccgggtccag ccccagccag agcagcatgg tggcccggac      300
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acagacagtg cggggcaccc tggcctacct gcccgaggag tacatcaaga cgggaaggct   360

ggctgtggac acggacacct tcagctttgg ggtggtagtg ctagagacct tggctggtca   420

gagggctgtg aagacgcacg gtgccaggac caagtatctg aaagacctgg tggaagagga   480

ggctgaggag gctggagtgg ctttgagaag cacccagagc acactgcaag caggtctggc   540

tgcagatgcc tgggctgctc ccatcgccat gcagatctac aagaagcacc tggaccccag   600

gcccgggccc tgccacctga gctgggcctg ggcctgggcc agctggcctg ctgctgcctg   660

caccgccggg ccaaaaggag gcctcctatg acccaggtgt acgagaggct agagaagctg   720

caggcagtgg tggcgggggt gcccgggcat ttggaggccg ccagctgcat ccccccttcc   780

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cagggggaca cggcaggaga atcgagctgg gggagtggcc caggatcccg gcccacagcc   1080

gtggaaggac tggcccttgg cagctctgca tcatcgtcgt cagagccacc gcagattatc   1140

atcaaccctg cccgacagaa gatggtccag aagctggccc tgtacgagga tggggccctg   1200

gacagcctgc agctgctgtc gtccagctcc ctcccaggct tgggcctgga acaggacagg   1260

caggggcccg aagaaagtga tgaatttcag agctgatgtg ttcacctggg cagatccccc   1320

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tctgccggca gtggggtgg gggcccatgc ccgcggggga gagaaggagg tggccctgct   1440

gttctaggct ctgtgggcat aggcaggcag agtggaaccc tgcctccatg ccagcatctg   1500

ggggcaagga aggctggcat catccagtga ggaggctggc gcatgttggg aggctgctgg   1560

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catgatgaga ccctgtctct gccaaaaaat tttttaaact attagcctgg cgtggtagcg   1920

acgcttgtgg tcccagctgc tggggaggct gaagtaggag gatcatttat gcttgggagg   1980
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tcgaggctgc agtgagtcat gattgtatga ctgcactcca gcctgggtga cagagcaaga    2040

ccctgtttca aaaagaaaaa ccctgggaaa agtgaagtat ggctgtaagt ctcatggttc    2100

agtcctagca agaagcgaga attctgagat cctccagaaa gtcgagcagc acccacctcc    2160

aacctcgggc cagtgtcttc aggctttact ggggacctgc gagctggcct aatgtggtgg    2220

cctgcaagcc aggccatccc tgggcgccac agacgagctc cgagccaggt caggcttcgg    2280

aggccacaag ctcagcctca ggcccaggca ctgattgtgg cagaggggcc actacccaag    2340

gtctagctag gcccaagacc tagttacaga cagggaaggg aaacattttc agggaaaaga    2400

catgtatcac atgtcttcag aagcaagtca ggtttcatgt aaccgagtgt cctcttgcgt    2460

gtccaaaagt agcccagggc tgtagcacag gcttcacagt gattttgtgt tcagccgtga    2520

gtcacactac atgcccccgt gaagctgggc attggtgacg tccaggttgt ccttgagtaa    2580

taaaaacgta tgttgcaatc tcgggaaa                                       2608


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<212>    DNA
<213>    Homo sapiens

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ggacgccctg gagcccgccg actggtgcca gttcgccgcc ctgatcgtgc gcgaccagac     240

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caaccgcaac gcccgtgtgg ccgacctcgt gcacatcctc acgcacctgc agctgctccg     360

tgcgcgggac atcatcacag cctggcaccc tcccgccccg cttccgtccc caggcaccac     420

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ggtgtatgct gtgaagaggc tgaaggagaa cgctgacctg gagtggactg cagtgaagca     840
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gagcttcctg accgaggtgg agcagctgtc caggtttcgt cacccaaaca ttgtggactt      900

tgctggctac tgtgctcaga acggcttcta ctgcctggtg tacggcttcc tgcccaacgg      960

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cagccgtgag tcacactaca tgcccccgtg aagctgggca ttggtgacgt ccaggttgtc     1200

cttgagtaat aaaaacgtat gttgcaatct cgggaaa                              1237


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<212>   DNA
<213>   Homo sapiens

<220>
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<223>   "n" can be any nucleotide 'a', 'c' , 'g' or 't'


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ttattttagg gtgatgttca cagaagaaga tgtcaaattc tacttggctg aacttgcact      120

tgctttagac catctacata gcctgggaat aatttataga gacttaaaac cagaaaatat      180

acttcttgat gaagaaggtc acatcaagtt aacagatttc ggcctaagta aagagtctat      240

tgaccatgaa aagaaggcat attctttttg tggaactgtg agtatatgg ctccagaagt       300

agttaatcgt cgaggtcata ctcagagtgc tgactggtgg tcttttggtg tgttaatgtt      360

tgaaatgctt actggtacac tcccttttcca aggaaaagat cgaaaagaaa caatgactat      420

gattcttaaa gccaaacttg gaatgccaca gtttttgagt cctgaagcgc agagtctttt      480

acgaatgctt ttcaagcgaa atcctgcaaa cagattaggt gcaggaccag atggagttga      540

agaaattaaa agacattcat ttttctcaac gatagactgg aataaactgt atagaagaga      600

aattcatccg ccatttaaac ctgcaacggg caggcctgaa gatacattct attttgatcc      660

tgagtttact gcaaaaactc ccaaagattc acctggcatt ccacctagtg ctaatgcaca      720

tcagcttttt cgggggttta gttttgttgc tattacctca gatgatgaaa gccaagctat      780

gcagacagtt ggtgtacatt caattgttca gcagttacac aggaacagta ttcagtttac      840

tgatggatat gaagtaaaag aagatattgg agttggctcc tactctgttt gcaagagatg      900
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tatacataaa gctacaaaca tggagtttgc agtgaaggta aatttttttt atttaaaatg        960

caattcatac agttcttgtt catgcatgtc agtaccagtt aaaaattaca ctccccttgt       1020

tgttaaaagt gccttttgtt ataaaaaagt taaatatctg gctagtgatc ttcagagatc       1080

ttaatctaga accctgtgag ctaaaggtaa ggtggttata tatctagttt tcccagagca       1140

gtagcagttt acacctcaag tgattttttt tctttttta cctcaagtga tttttaaagt       1200

atcttttac tctgagaagt ccccatttta tgctcanggt gtcagcaaat tcctcaaaat       1260

tgtgtgcaaa attttgtatg tttaca                                            1286


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<212>    DNA
<213>    Homo sapiens

<220>
<221>    -
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caaactgaag aagtcagtat caaagaaatt gcaatcacac atcatgtaaa ggaaggacat       180

gaaaaggcag atccttccca gtttgaactt ttaaaagtat tagggcaggg atcatttgga       240

aaggttttct tagttaaaaa aatctcaggc tctgatgcta ggcagcttta tgccatgaag       300

gtattgaaga aggccacact gaaagttcga gaccgagttc ggacaaaaat ggaacgtgat       360

atcttggtag aggttaatca tcctttatt gtcaagttgc attatgcttt tcaaactgaa       420

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ttagaccatc tacatagcct gggaataatt tatagagact taaaaccaga aaagtaagga       600

atcatgctac taagttgaat acaatgtaat atgattgttt aggagattat aaaaaatcaa       660

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cactgtagtt tcatacttta aatnactcag tt                                     752


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<211>    1826
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gaaggtggca caagcaagtt ctagccagta cttccgggaa tctatactca atgacatcag   1200

gaaagctcgt aatttataca ctggtaaaga attggcagct gagttggcaa gaattcggca   1260

gcgagtagat aatatcgaag tcttgacagc agatattgtc ataaatctgt tactttccta   1320

cagagatatc caggactatg attctattgt gaagctggta gagactttag aaaaactgcc   1380

aacctttgat ttggcctccc atcaccatgt gaagtttcat tatgcatttg cactgaatag   1440

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cgaaggacaa gttgcttcag atatgtattg cctagttggt cgaatctaca agatatgtt   1560

tttggactct aatttcacgg acactgaaag cagagaccat ggagcttctt ggttcaaaaa   1620

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ggcatttgaa tctgagccaa cactacagtc aggaattaat tatgcggtcc tcctcctggc    1680

agctggacac cagtttgaat cttcctttga gctccggaaa gttggtaatt acaacttgat    1740

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attctgacgg ctctccaggt tttgtc                                         1826
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<211> 476
<212> DNA
<213> Homo sapiens

<400> 86
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ctgcaaatgt ctttcgtgga agacataagt ggatgttcaa atgagagaat ttgaagtgtt    180

gaaaaaactc aatcacaaaa atattgtcaa attatttgct attgaagagg agacaacaac    240

aagacataaa gtacttatta tggaattttg tccatgtggg agtttataca ctgtttttaga   300

agaaccttct aatgcctatg gactaccaga atctgaattc ttaattgttt tgcgagatgt    360

ggtgggtgga atgaatcatc tacgagagaa tggtatagtg caccgtgata tcaagccagg    420

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<210> 87
<211> 2131
<212> DNA
<213> Homo sapiens

<220>
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<223> "n" can be any nucleotide 'a', 'c' , 'g' or 't'

<400> 87
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caggatctta cttggatcca gagtgctagc tgcaaaagct tctgggaatt gtacacttaa    180

ctctgaagtt ttatctttaa tataggaagt gccgcgtatg atgctgtcct tgacagaaat    240

gtggccatta agaagctcag cagacccttt cagaaccaaa cacatgccaa gagagcgtac    300

cgggagctgg tcctcatgaa gtgtgtgaac cataaaaaca ttattagttt attaaatgtc    360

ttcacacccc agaaaacgct ggaggagttc caagatgttt acttagtaat ggaactgatg    420
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gatgccaact tatgtcaagt gattcagatg gaattagacc atgagcgaat gtcttacctg      480

ctgtaccaaa tgttgtgtgg cattaagcac ctccattctg ctggaattat tcacagggat      540

ttaaaaccaa gtaacattgt agtcaagtct gattgcacat tgaaaatcct ggactttgga      600

ctggccagga cagcaggcac aagcttcatg atgactccat atgtggtgac acgttattac      660

agagcccctg aggtcatcct ggggatgggc tacaaggaga cgtggatat atggtctgtg       720

ggatgcatta tgggagaaat ggttcgccac aaaatcctct ttccaggaag ggactatatt      780

gaccagtgga ataaggtaat tgaacaacta ggaacaccat gtccagaatt catgaagaaa      840

ttgcaaccca cagtaagaaa ctatgtggag aatcggccca agtatgcggg actcaccttc      900

cccaaactct tcccagattc cctcttccca gcggactccg agcacaataa actcaaagcc      960

agccaagcca gggacttgtt gtcaaagatg ctagtgattg acccagcaaa aagaatatca     1020

gtggacgacg ccttacagca tccctacatc aacgtctggt atgacccagc cgaagtggag     1080

gcgcctccac ctcagatata tgacaagcag ttggatgaaa gagaacacac aattgaagaa     1140

tggaaagaac ttatctacaa ggaagtaatg aattcagaag aaaagactaa aaatggtgta     1200

gtaaaaggac agccttctcc ttcagcacag gtgcagcagt gaacagcagt gagagtctcc     1260

ctccatcctc gtctgtcaat gacatctcct ccatgtccac cgaccagacc ctggcatctg     1320

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cctgcctgcg aaacccagcg ttcttcagga gatgatgtga tggaacacac acacgcag      1440

acacacacac acacaaat gcagacacac aacatcaaga aaacagcaag ggagagaatc      1500

caagcctaaa attaaataaa tctttcagcc tgcttcttcc ccagggttct gtattgcagc     1560

taagctcaaa tgtatattta acttctagtt gctcttgctt tggtcttctt ccaatgatgc     1620

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ggccccatcc agcatgtgtg tgtctctatc ttgcatctac ctgctccttg cctagtcag      1800

atggatgtag atacagatcc gcatgtgtct gtattcatac agcactactt acttagagat     1860

gctactgtca gtgtcctcag ggctctacca agacataatg cactggggta ccacatggtc     1920

catttcatgt gatctattac tctgacataa acccatctgt aatatattgc cagtatataa     1980

gctgtttagt ttgttaattg attaaactgt atgtcttata agaaacatg taaaggggga      2040

atatatgggg ggagtgagct ctctcagacc cttgaagatg tagcttccaa atttgaatgg     2100
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<210>  88
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<212>  DNA
<213>  Homo sapiens

<400>  88
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acaagtggat gtgtcatata ttgccaaaca ttacaacatg agcaaaagca aagttgacaa    360

ccagttctac agtgtggaag tgggagactc aaccttcaca gttctcaagc gctaccagaa    420

tctaaagcct attggctctg gggctcaggg catagtttgt gccgcgtatg atgctgtcct    480

tgacagaaat gtggccatta agaagctcag cagacccttt cagaaccaaa cacatgccaa    540

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tatttttaaa cttctggcag tgggagtttg taagattgga aaaagaaaat gtgtctgtac    660

ttgagtaaga aaggctttct ttgctttgca attcctgcct cttaagattg tttatcctgc    720

caatatgcta cattcgattt cattgtcctc atggtagctt tctgcttaaa aatcacctaa    780

aaaccatatg atgtggaagt gatgaatttt ataaatattt ccctagttag aaaatttacc    840

atatttggtt atcttgctcc aaattgagag cttcaagaaa gaaacaagac aaacaaagcc    900

caaagccaga aaaaaaaaaa aacctacaaa gcaccatgct acatttcttt ataatttaga    960

tttaatttag aatttattaa tttaaaatt                                      989


<210>  89
<211>  1818
<212>  DNA
<213>  Homo sapiens

<400>  89
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ctccagcctg ggcaacaaga gcgaaactcc atctcaaaaa gaaaaaaaaa gatatatatg    180

tgtgacttac aggtacaggt aaagttgctt ctggtttttct ggttgttgca tggtatttcc    240
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gaccaaagtg acactggaga atttttatag caaccttatc gctcaacatg aagaacgaga    720

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aagacttgga ttggaagatt ttgagtcctt aaaagtaata ggcagaggag catttggtga    900

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agcagatatg cttgaaaaag agcaggttgg ccacattcgt gcggagcgtg acattctagt   1020

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attcaccaac ttggattcat ccacagagac atcaaaccag acaaccttct tttggacagc   1260

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acagaatttt ataggaatct gaaccacagc ctccccagtg atttcacttt ccagaacatg   1380

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caattggcag tgatctaagt gatttcccta cttgtctttc aaagtgaatt gttttagaca   1680

gatgacacct ctttcagtaa gatgtatccc actccattct tgggcttact ggcatcctgc   1740

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tagcaacaat tcttaaagag gttttggaag gcttagacta tctacacaga aacggtcaga   180

ttcacaggga tttgaaagct ggtaatattc ttctgggtga ggatggttca gtacaaatag   240

cagattttgg ggtaagtgcg ttcctagcaa cagggggtga tgttacccga aataaagtaa   300

gaaaaacatt cgttggcacc ccatgttgga tggctcctga agtcatggaa caggtgagag   360

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cctttagaaa attactttca ctgtgtcttc agaaagatcc ttccaaaagg cccacagcag   600

cagaactttt aaaatgcaaa ttcttccaga aagccaagaa cagagagtac ctgattgaga   660

agctgcttac aagaacacca gacatagccc aaagagccaa aaaggtaaga agagttcctg   720

ggtcaagtgg tcaccttcat aaaaccgaag acggggactg ggagtggagt gacgacgaga   780

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aagaagaaaa tccagagatt gcagtgagtg ccagcaccat ccccgaacaa atacagtccc   900

tctctgtgca cgactctcag ggcccaccca atgctaatga agactacaga gaagcttctt   960

cttgtgccgt gaacctcgtt ttgagattaa gaaactccag aaaggaactt aatgacatac   1020

gatttgagtt tactccagga agagatacag cagatggtgt atctcaggag ctcttctctg   1080

ctggcttggt ggatggtcac gatgtagtta tagtggctgc taatttacag aagattgtag   1140

atgatcccaa agctttaaaa acattgacat ttaagttggc ttctggctgt gatgggtcgg   1200

agattcctga tgaagtgaag ctgattgggt ttgctcagtt gagtgtcagc tgatgtatgt   1260

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ctctttctgc ccatttcctc ccaccccctc actcccattt cctagcaaaa tcagaagatt   1380

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gcacgactgt tgctcatttt tccaaaagct atttaatatt cttagcaatc aatttggata    1560

tcccttaagt gaaaagaatc tgaaatacac tcaggtggtc ttatttattg gcaacaaaag    1620

gaattttcta tccagaagcc tatttctcct ttcattgttg ttatttctgt tataatactt    1680

taattgtaca tctgacaata ctgcctcttt tatgttgtat ttagaaatta atatacttat    1740

aaaattaaga tttattagcc aaacttgaat tctagtttta aaactgactg tgaatttttat    1800

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gtttgcctaa aaaccaattt acaatctgac tgtctcttgg gagagggagg tgccttgcaa    2040

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ttcacaggga tttgaaagct ggtaatattc ttctgggtga ggatggttca gtacaaatag   240

cagattttgg ggtaagtgcg ttcctagcaa caggggtga tgttacccga aataaagtaa    300

gaaaaacatt cgttggcacc ccatgttgga tggctcctga agtcatggaa caggtgagag   360

gctatgactt caaggctgac atgtggagtt ttggaataac tgccattgaa ttagcaacag   420

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cagaactttt aaaatgcaaa ttcttccaga aagccaagaa cagagagtac ctgattgaga   660

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tctctgtgca cgactctcag ggcccaccca atgctaatga agactacaga gaagcttctt   960

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<212> PRT
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<400> 92

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Leu Phe Val Ser Thr Leu Asp Gly Ser Leu His Ala Val Ser Lys Arg
        35   40   45

Thr Gly Ser Ile Lys Trp Thr Leu Lys Glu Asp Pro Val Leu Gln Val
    50   55   60

Pro Thr His Val Glu Glu Pro Ala Phe Leu Pro Asp Pro Asn Asp Gly
65   70   75   80

Ser Leu Tyr Thr Leu Gly Ser Lys Asn Asn Glu Gly Leu Thr Lys Leu
            85   90   95

Pro Phe Thr Ile Pro Glu Leu Val Gln Ala Ser Pro Cys Arg Ser Ser
            100   105   110

Asp Gly Ile Leu Tyr Met Gly Lys Lys Gln Asp Ile Trp Tyr Val Ile
        115   120   125

Asp Leu Leu Thr Gly Glu Lys Gln Gln Thr Leu Ser Ser Ala Phe Ala
    130   135   140

Asp Ser Leu Cys Pro Ser Thr Ser Leu Leu Tyr Leu Gly Arg Thr Glu
145   150   155   160

Tyr Thr Ile Thr Met Tyr Asp Thr Lys Thr Arg Glu Leu Arg Trp Asn
            165   170   175

Ala Thr Tyr Phe Asp Tyr Ala Ala Ser Leu Pro Glu Asp Glu Gly Asp
        180   185   190

Tyr Lys Met Ser His Phe Val Ser Asn Gly Asp Gly Leu Val Val Thr
    195   200   205

Val Asp Ser Glu Ser Gly Asp Val Leu Trp Ile Gln Asn Tyr Ala Ser
    210   215   220

Pro Val Val Ala Phe Tyr Val Trp Gln Arg Glu Gly Leu Arg Lys Val
225   230   235   240

Met His Ile Asn Val Ala Val Glu Thr Leu Arg Tyr Leu Thr Phe Met
            245   250   255

Ser Gly Glu Val Gly Arg Ile Thr Lys Trp Lys Tyr Pro Phe Pro Lys
        260   265   270

Glu Thr Glu Ala Lys Ser Lys Leu Thr Pro Thr Leu Tyr Val Gly Lys
    275   280   285

Tyr Ser Thr Ser Leu Tyr Ala Ser Pro Ser Met Val His Glu Gly Val
290   295   300

Ala Val Val Pro Arg Gly Ser Thr Leu Pro Leu Leu Glu Gly Pro Gln
305   310   315   320

Thr Asp Gly Val Thr Ile Gly Asp Lys Gly Glu Cys Val Ile Thr Pro
                325   330   335

Ser Thr Asp Val Lys Phe Asp Pro Gly Leu Lys Ser Lys Asn Lys Leu
                340   345   350

Asn Tyr Leu Arg Asn Tyr Trp Leu Leu Ile Gly His His Glu Thr Pro
          355   360   365

Leu Ser Ala Ser Thr Lys Met Leu Glu Arg Phe Pro Asn Asn Leu Pro
          370   375   380

Lys His Arg Glu Asn Val Ile Pro Ala Asp Ser Glu Lys Lys Ser Phe
385   390   395   400

Glu Glu Thr Leu Leu Gln Met Thr Ser Val Phe Ser Trp Ile Leu Asn
                405   410   415

Leu Pro Ser Lys Glu Glu Val Phe Ala Phe Leu Arg Ile Phe Glu Lys
          420   425   430

Asn Met

<210>   93
<211>   232
<212>   PRT
<213>   Homo sapiens

<400>   93

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Asp Lys Lys Lys Met Glu Leu Ser Leu Asn Ile Pro Val Asn His Gly
          20   25   30

Pro Gln Glu Glu Ser Cys Gly Ser Ser Gln Leu His Glu Asn Ser Gly
          35   40   45

Ser Pro Glu Thr Ser Arg Ser Leu Pro Ala Pro Gln Asp Asn Asp Phe
     50   55   60

Leu Ser Arg Lys Ala Gln Asp Cys Tyr Phe Met Lys Leu His His Cys
65   70   75   80

Pro Gly Asn His Ser Trp Asp Ser Thr Ile Ser Gly Ser Gln Arg Ala
                85   90   95

Ala Phe Cys Asp His Lys Thr Thr Pro Cys Ser Ser Ala Ile Ile Asn
               100   105   110

Pro Leu Ser Thr Ala Gly Asn Ser Glu Arg Leu Gln Pro Gly Ile Ala

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                    115                    120                         125

     Gln Gln Trp Ile Gln Ser Lys Arg Glu Asp Ile Val Asn Gln Met Thr
              130                     135                 140

     Glu Ala Cys Leu Asn Gln Ser Leu Asp Ala Leu Leu Ser Arg Asp Leu
     145                     150                 155                 160

     Ile Met Lys Glu Asp Tyr Glu Leu Val Ser Thr Lys Pro Thr Arg Thr
                     165                     170                 175

     Ser Lys Val Arg Gln Leu Leu Asp Thr Thr Asp Ile Gln Gly Glu Glu
                 180                     185                 190

     Phe Ala Lys Val Ile Val Gln Lys Leu Lys Asp Asn Lys Gln Met Gly
                 195                     200                 205

     Leu Gln Pro Tyr Pro Glu Ile Leu Val Val Ser Arg Ser Pro Ser Leu
              210                     215                 220

     Asn Leu Leu Gln Asn Lys Ser Met
     225                     230

     <210>  94
     <211>  209
     <212>  PRT
     <213>  Homo spaiens

     <400>  94

     Met Ala Asp Leu Glu Ala Val Leu Ala Asp Val Ser Tyr Leu Met Ala
     1                   5                   10                  15

     Met Glu Lys Ser Lys Ala Thr Pro Ala Ala Arg Ala Ser Lys Lys Ile
                 20                  25                  30

     Leu Leu Pro Glu Pro Ser Ile Arg Ser Val Met Gln Lys Tyr Leu Glu
              35                  40                  45

     Asp Arg Gly Glu Val Thr Phe Glu Lys Ile Phe Ser Gln Lys Leu Gly
          50                  55                  60

     Tyr Leu Leu Phe Arg Asp Phe Cys Leu Asn His Leu Glu Glu Ala Arg
     65                  70                  75                  80

     Pro Leu Val Glu Phe Tyr Glu Glu Ile Lys Lys Tyr Glu Lys Leu Glu
                     85                  90                  95

     Thr Glu Glu Glu Arg Val Ala Arg Ser Arg Glu Ile Phe Asp Ser Tyr
                 100                 105                 110

     Ile Met Lys Glu Leu Leu Ala Cys Ser His Pro Phe Ser Lys Ser Ala
                 115                 120                 125

     Thr Glu His Val Gln Gly His Leu Gly Lys Lys Gln Val Pro Pro Asp
              130                 135                 140
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Leu Phe Gln Pro Tyr Ile Glu Glu Ile Cys Gln Asn Leu Arg Gly Asp
145   150   155   160

Val Phe Gln Lys Phe Ile Glu Arg Val Ala Leu Ala Ala Gly Ala Ala
                165   170   175

Thr Leu Pro Ala Val Pro Ser Cys Pro Asn Pro Gln His Pro Gly Ser
            180   185   190

Gly Thr Thr Ala Arg His Leu Gln Val Gly Pro Tyr Trp Pro Arg Leu
        195   200   205

Ala

<210> 95
<211> 454
<212> PRT
<213> Homo sapiens

<400> 95

Met Gly Leu Val Ser Ser Lys Lys Pro Asp Lys Glu Lys Pro Ile Lys
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Glu Lys Asp Lys Gly Gln Trp Ser Pro Leu Lys Val Ser Ala Gln Asp
            20   25   30

Lys Asp Ala Pro Pro Leu Pro Pro Leu Val Val Phe Asn His Leu Thr
        35   40   45

Pro Pro Pro Pro Asp Glu His Leu Asp Glu Asp Lys His Phe Val Val
        50   55   60

Ala Leu Tyr Asp Tyr Thr Ala Met Asn Asp Arg Asp Leu Gln Met Leu
65   70   75   80

Lys Gly Glu Lys Leu Gln Val Leu Lys Gly Thr Gly Asp Trp Trp Leu
                85   90   95

Ala Arg Ser Leu Val Thr Gly Arg Glu Gly Tyr Val Pro Ser Asn Phe
            100   105   110

Val Ala Arg Val Glu Ser Leu Glu Met Glu Arg Trp Phe Phe Arg Ser
        115   120   125

Gln Gly Arg Lys Glu Ala Glu Arg Gln Leu Leu Ala Pro Ile Asn Lys
        130   135   140

Ala Gly Ser Phe Leu Ile Arg Glu Ser Glu Thr Asn Lys Gly Ala Phe
145   150   155   160

Ser Leu Ser Val Lys Asp Val Thr Thr Gln Gly Glu Leu Ile Lys His
                165   170   175

Tyr Lys Ile Arg Cys Leu Asp Glu Gly Gly Tyr Tyr Ile Ser Pro Arg
                180   185   190

Ile Thr Phe Pro Ser Leu Gln Ala Leu Val Gln His Tyr Ser Ser Tyr
        195   200   205

Tyr Lys Asn Asn Met Lys Val Ala Ile Lys Thr Leu Lys Glu Gly Thr
        210   215   220

Met Ser Pro Glu Ala Phe Leu Gly Glu Ala Asn Val Met Lys Ala Leu
225   230   235   240

Gln His Glu Arg Leu Val Arg Leu Tyr Ala Val Val Thr Lys Glu Pro
            245   250   255

Ile Tyr Ile Val Thr Glu Tyr Met Ala Arg Gly Cys Leu Leu Asp Phe
            260   265   270

Leu Lys Thr Asp Glu Gly Ser Arg Leu Ser Leu Pro Arg Leu Ile Asp
        275   280   285

Met Ser Ala Gln Ile Ala Glu Gly Met Ala Tyr Ile Glu Arg Met Asn
        290   295   300

Ser Ile His Arg Asp Leu Arg Ala Ala Asn Ile Leu Val Ser Glu Ala
305   310   315   320

Leu Cys Cys Lys Ile Ala Asp Phe Gly Leu Ala Arg Ile Ile Asp Ser
                325   330   335

Glu Tyr Thr Ala Gln Glu Gly Ala Lys Phe Pro Ile Lys Trp Thr Ala
            340   345   350

Pro Glu Ala Ile His Phe Gly Val Phe Thr Ile Lys Ala Asp Val Trp
            355   360   365

Ser Phe Gly Val Leu Leu Met Glu Val Val Thr Tyr Gly Arg Val Pro
        370   375   380

Tyr Pro Gly Met Ser Asn Pro Glu Val Ile Arg Asn Leu Glu Arg Gly
385   390   395   400

Tyr Arg Met Pro Arg Pro Asp Thr Cys Pro Pro Glu Leu Tyr Arg Gly
                405   410   415

Val Ile Ala Glu Cys Trp Arg Ser Arg Pro Glu Glu Arg Pro Thr Phe
                420   425   430

Glu Phe Leu Gln Ser Val Leu Glu Asp Phe Tyr Thr Ala Thr Glu Arg
            435   440   445

Gln Tyr Glu Leu Gln Pro
        450

<210>   96
<211>   82
<212>   PRT
<213>   Homo sapiens

<400> 96

Met Glu Asn Phe Gln Lys Val Glu Lys Ile Gly Glu Gly Thr Tyr Gly
1   5   10   15

Val Val Tyr Lys Ala Arg Asn Lys Leu Thr Gly Glu Val Val Ala Leu
            20   25   30

Lys Lys Ile Arg Leu Asp Thr Glu Thr Glu Gly Val Pro Ser Thr Ala
            35   40   45

Ile Arg Glu Ile Ser Leu Leu Lys Glu Leu Asn His Pro Asn Ile Val
        50   55   60

Lys Leu Leu Asp Val Ile His Thr Glu Asn Lys Asn Ile Ser Leu Lys
65   70   75   80

Glu Gly

<210>   97
<211>   118
<212>   PRT
<213>   Homo sapiens

<400>   97

Met Thr Arg Asp Glu Ala Leu Pro Asp Ser His Ser Ala Gln Asp Phe
1   5   10   15

Tyr Glu Asn Tyr Glu Pro Lys Glu Ile Leu Gly Arg Gly Val Ser Ser
            20   25   30

Val Val Arg Arg Cys Ile His Lys Pro Thr Ser Gln Glu Tyr Ala Val
            35   40   45

Lys Val Ile Asp Val Thr Gly Gly Gly Ser Phe Ser Pro Glu Glu Val
        50   55   60

Arg Glu Leu Arg Glu Ala Thr Leu Lys Glu Val Asp Ile Leu Arg Lys
65   70   75   80

Val Ser Gly His Pro Asn Ile Ser Ile Gln Leu Lys Asp Thr Tyr Glu
            85   90   95

Thr Asn Thr Phe Phe Phe Leu Val Phe Asp Leu Met Lys Arg Gly Glu
            100   105   110

Leu Phe Asp Leu Pro His
            115

<210>   98
<211>   167
<212>   PRT
<213>   Homo sapiens

<400>   98

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Val Phe Leu Gly Arg Cys Arg Ser Val Lys Glu Phe Glu Lys Leu Asn
1               5                   10                  15

Arg Ile Gly Glu Gly Thr Tyr Gly Ile Val Tyr Arg Ala Arg Asp Thr
            20                  25                  30

Gln Thr Asp Glu Ile Val Ala Leu Lys Lys Val Arg Met Asp Lys Glu
            35                  40                  45

Lys Asp Gly Ile Pro Ile Ser Ser Leu Arg Glu Ile Thr Leu Leu Leu
        50                  55                  60

Arg Leu Arg His Pro Asn Ile Val Glu Leu Lys Glu Val Val Val Gly
65                  70                  75                  80

Asn His Leu Glu Ser Ile Phe Leu Val Met Gly Tyr Cys Glu Gln Asp
                85                  90                  95

Leu Ala Ser Leu Leu Glu Asn Met Pro Thr Pro Phe Ser Glu Ala Gln
            100                 105                 110

Val Lys Cys Ile Val Leu Gln Val Leu Arg Gly Leu Gln Tyr Leu His
        115                 120                 125

Arg Asn Phe Ile Ile His Arg Asp Leu Lys Val Ser Asn Leu Leu Met
        130                 135                 140

Thr Asp Lys Gly Cys Val Lys Thr Gly Gly Cys Asn Leu Gly Gln Ala
145                 150                 155                 160

Trp Ser Leu Asp Gly Thr Trp
                165

<210>   99
<211>   141
<212>   PRT
<213>   Homo sapiens

<400>   99

Met Ser Ser Ala Gly Gly Val Ser Arg Arg Leu Ala Ala Val Arg Ser
1               5                   10                  15

Thr Val Leu Cys Arg Ala Val Gly Cys Ile Leu Ala Glu Leu Leu Ala
            20                  25                  30

His Arg Pro Leu Leu Pro Gly Thr Ser Glu Ile His Gln Ile Asp Leu
            35                  40                  45

Ile Val Gln Leu Leu Gly Thr Pro Ser Glu Asn Ile Trp Pro Gly Phe
        50                  55                  60

Ser Lys Leu Pro Leu Val Gly Gln Tyr Ser Leu Arg Lys Gln Pro Tyr
65                  70                  75                  80

Asn Asn Leu Lys His Lys Phe Pro Trp Leu Ser Glu Ala Gly Leu Arg
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Leu Leu His Phe Leu Phe Met Tyr Asp Pro Lys Lys Arg Ala Thr Ala
            100   105   110

Gly Asp Cys Leu Glu Ser Ser Tyr Phe Lys Glu Lys Pro Leu Arg Leu
            115   120   125

Pro Ile Ser Gly Val Cys Glu Gly Cys Arg Glu Pro Gly
    130   135   140

<210>   100
<211>   119
<212>   PRT
<213>   Homo sapiens

<400>   100

Val Phe Leu Gly Arg Cys Arg Ser Val Lys Glu Phe Glu Lys Leu Asn
1   5   10   15

Arg Ile Gly Glu Gly Thr Tyr Gly Ile Val Tyr Arg Ala Arg Asp Thr
            20   25   30

Gln Thr Asp Glu Ile Val Ala Leu Lys Lys Val Arg Met Asp Lys Glu
            35   40   45

Lys Asp Gly Ile Pro Ile Ser Ser Leu Arg Glu Ile Thr Leu Leu Leu
    50   55   60

Arg Leu Arg His Pro Asn Ile Leu Pro Ala Arg Ala Pro Trp Lys Gly
65   70   75   80

Arg Ser Gly Gly Ser Ile Arg Gly Cys Arg Gly Leu Met Trp Ser Ser
            85   90   95

Ser Leu Cys Trp Lys Cys Ala Thr Thr Ala Ser Trp Glu Glu Trp Trp
            100   105   110

Val Gln Ser Pro Arg Cys Leu
        115

<210>   101
<211>   756
<212>   PRT
<213>   Homo sapiens

<400>   101

Met Gly Glu Ala Glu Lys Phe His Tyr Ile Tyr Ser Cys Asp Leu Asp
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Ile Asn Val Gln Leu Lys Ile Gly Ser Leu Glu Gly Lys Arg Glu Gln
            20   25   30

Lys Ser Tyr Lys Ala Val Leu Glu Asp Pro Met Leu Lys Phe Ser Gly
            35   40   45

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Leu Tyr Gln Glu Thr Cys Ser Asp Leu Tyr Val Thr Cys Gln Val Phe
    50              55              60

Ala Glu Gly Lys Pro Leu Ala Leu Pro Val Arg Thr Ser Tyr Lys Ala
65              70              75              80

Phe Ser Thr Arg Trp Asn Trp Asn Glu Trp Leu Lys Leu Pro Val Lys
            85              90              95

Tyr Pro Asp Leu Pro Arg Asn Ala Gln Val Ala Leu Thr Ile Trp Asp
            100             105             110

Val Tyr Gly Pro Gly Lys Ala Val Pro Val Gly Gly Thr Thr Val Ser
        115             120             125

Leu Phe Gly Lys Tyr Gly Met Phe Arg Gln Gly Met His Asp Leu Lys
    130             135             140

Val Trp Pro Asn Val Glu Ala Asp Gly Ser Glu Pro Thr Lys Thr Pro
145             150             155             160

Gly Arg Thr Ser Ser Thr Leu Ser Glu Asp Gln Met Ser Arg Leu Ala
                165             170             175

Lys Leu Thr Lys Ala His Arg Gln Gly His Met Val Lys Val Asp Trp
        180             185             190

Leu Asp Arg Leu Thr Phe Arg Glu Ile Glu Met Ile Asn Glu Ser Val
    195             200             205

Lys Arg Ser Ser Asn Phe Met Tyr Leu Met Gly Gly Phe Arg Cys Val
    210             215             220

Lys Cys Asp Asp Lys Glu Tyr Gly Ile Val Tyr Tyr Glu Lys Asp Gly
225             230             235             240

Asp Glu Ser Ser Pro Ile Leu Thr Ser Phe Glu Leu Val Lys Val Pro
            245             250             255

Asp Pro Gln Met Ser Leu Glu Asn Leu Val Glu Ser Lys His His Asn
            260             265             270

Leu Pro Arg Ser Leu Arg Ser Gly Pro Ser Asp His Asp Leu Lys Pro
        275             280             285

Tyr Pro Ser Pro Arg Asp Gln Leu Lys Asn Ile Val Ser Tyr Pro Pro
    290             295             300

Ser Lys Pro Pro Thr Tyr Glu Glu Gln Asp Leu Val Trp Glu Phe Arg
305             310             315             320

Tyr Tyr Leu Thr Asn Gln Asp Lys Ala Leu Thr Lys Ile Leu Thr Ser
            325             330             335

Val Ile Trp Asp Leu Pro Gln Glu Ala Lys Gln Ala Leu Ala Leu Leu
            340             345             350
```

```
Gly Lys Trp Asn Pro Met Asp Val Glu Asp Ser Leu Glu Leu Ile Ser
    355             360             365

Ser His Tyr Thr Asn Pro Thr Val Arg Arg Tyr Ala Val Ala Arg Leu
    370             375             380

Arg Gln Ala Asp Asp Glu Asp Leu Leu Met Tyr Leu Leu Gln Leu Val
385             390             395             400

Gln Ala Leu Lys Tyr Glu Asn Phe Asp Asp Ile Lys Asn Gly Leu Glu
            405             410             415

Pro Thr Lys Lys Asp Ser Gln Ser Ser Val Ser Glu Asn Val Ser Asn
            420             425             430

Ser Gly Ile Asn Ser Ala Glu Ile Asp Ser Ser Gln Ile Ile Thr Ser
            435             440             445

Pro Leu Pro Ser Val Ser Ser Pro Pro Pro Ala Ser Lys Thr Lys Glu
    450             455             460

Val Pro Asp Gly Glu Asn Leu Glu Gln Asp Leu Cys Thr Phe Leu Ile
465             470             475             480

Ser Arg Ala Cys Lys Asn Ser Thr Leu Ala Asn Tyr Leu Tyr Trp Tyr
            485             490             495

Val Ile Val Glu Cys Glu Asp Gln Asp Thr Gln Gln Arg Asp Pro Lys
            500             505             510

Thr His Glu Met Tyr Leu Asn Val Met Arg Arg Phe Ser Gln Ala Leu
    515             520             525

Leu Lys Gly Asp Lys Ser Val Arg Val Met Arg Ser Leu Leu Ala Ala
    530             535             540

Gln Gln Thr Phe Val Asp Arg Leu Val His Leu Met Lys Ala Val Gln
545             550             555             560

Arg Glu Ser Gly Asn Arg Lys Lys Lys Asn Glu Arg Leu Gln Ala Leu
            565             570             575

Leu Gly Asp Asn Glu Lys Met Asn Leu Ser Asp Val Glu Leu Ile Pro
            580             585             590

Leu Pro Leu Glu Pro Gln Val Lys Ile Arg Gly Ile Ile Pro Glu Thr
    595             600             605

Ala Thr Leu Phe Lys Ser Ala Leu Met Pro Ala Gln Leu Phe Phe Lys
    610             615             620

Thr Glu Asp Gly Gly Lys Tyr Pro Val Ile Phe Lys His Gly Asp Asp
625             630             635             640

Leu Arg Gln Asp Gln Leu Ile Leu Gln Ile Ile Ser Leu Met Asp Lys
            645             650             655
```

Leu Leu Arg Lys Glu Asn Leu Asp Leu Lys Leu Thr Pro Tyr Lys Val
        660   665   670

Leu Ala Thr Ser Thr Lys His Gly Phe Met Gln Phe Ile Gln Ser Val
        675   680   685

Pro Val Ala Glu Val Leu Asp Thr Glu Gly Ser Ile Gln Asn Phe Phe
    690   695   700

Arg Lys Tyr Ala Pro Ser Glu Asn Gly Pro Asn Gly Ile Ser Ala Glu
705   710   715   720

Val Met Asp Thr Tyr Val Lys Ser Cys Ala Gly Tyr Cys Val Ile Thr
                725   730   735

Tyr Ile Leu Gly Val Gly Asp Arg His Leu Asp Asn Leu Leu Leu Thr
        740   745   750

Lys Thr Gly Gly
        755

<210> 102
<211> 508
<212> PRT
<213> Homo sapiens

<400> 102

Met Gly Glu Ala Glu Lys Phe His Tyr Ile Tyr Ser Cys Asp Leu Asp
1   5   10   15

Ile Asn Val Gln Leu Lys Ile Gly Ser Leu Glu Gly Lys Arg Glu Gln
                20   25   30

Lys Ser Tyr Lys Ala Val Leu Glu Asp Pro Met Leu Lys Phe Ser Gly
        35   40   45

Leu Tyr Gln Glu Thr Cys Ser Asp Leu Tyr Val Thr Cys Gln Val Phe
    50   55   60

Ala Glu Gly Lys Pro Leu Ala Leu Pro Val Arg Thr Ser Tyr Lys Ala
65   70   75   80

Phe Ser Thr Arg Trp Asn Trp Asn Glu Trp Leu Lys Leu Pro Val Lys
                85   90   95

Tyr Pro Asp Leu Pro Arg Asn Ala Gln Val Ala Leu Thr Ile Trp Asp
            100   105   110

Val Tyr Gly Pro Gly Lys Ala Val Pro Val Gly Gly Thr Thr Val Ser
        115   120   125

Leu Phe Gly Lys Tyr Gly Met Phe Arg Gln Gly Met His Asp Leu Lys
    130   135   140

Val Trp Pro Asn Val Glu Ala Asp Gly Ser Glu Pro Thr Lys Thr Pro

```
            145                        150                        155                        160

      Gly Arg Thr Ser Ser Thr Leu Ser Glu Asp Gln Met Ser Arg Leu Ala
                      165                    170                    175

      Lys Leu Thr Lys Ala His Arg Gln Gly His Met Val Lys Val Asp Trp
                      180                    185                    190

      Leu Asp Arg Leu Thr Phe Arg Glu Ile Glu Met Ile Asn Glu Ser Val
                      195                    200                    205

      Lys Arg Ser Ser Asn Phe Met Tyr Leu Met Gly Gly Phe Arg Cys Val
                  210                    215                    220

      Lys Cys Asp Asp Lys Glu Tyr Gly Ile Val Tyr Tyr Glu Lys Asp Gly
      225                    230                    235                    240

      Asp Glu Ser Ser Pro Ile Leu Thr Ser Phe Glu Leu Val Lys Val Pro
                      245                    250                    255

      Asp Pro Gln Met Ser Leu Glu Asn Leu Val Glu Ser Lys His His Asn
                      260                    265                    270

      Leu Pro Arg Ser Leu Arg Ser Gly Pro Ser Asp His Asp Leu Lys Pro
                      275                    280                    285

      Tyr Pro Ser Pro Arg Asp Gln Leu Lys Asn Ile Val Ser Tyr Pro Pro
                  290                    295                    300

      Ser Lys Pro Pro Thr Tyr Glu Glu Gln Asp Leu Val Trp Glu Phe Arg
      305                    310                    315                    320

      Tyr Tyr Leu Thr Asn Gln Asp Lys Ala Leu Thr Lys Ile Leu Thr Ser
                      325                    330                    335

      Val Ile Trp Asp Leu Pro Gln Glu Ala Lys Gln Ala Leu Ala Leu Leu
                      340                    345                    350

      Gly Lys Trp Asn Pro Met Asp Val Glu Asp Ser Leu Glu Leu Ile Ser
                  355                    360                    365

      Ser His Tyr Thr Asn Pro Thr Val Arg Arg Tyr Ala Val Ala Arg Leu
                  370                    375                    380

      Arg Gln Ala Asp Asp Glu Asp Leu Leu Met Tyr Leu Leu Gln Leu Val
      385                    390                    395                    400

      Gln Ala Leu Lys Tyr Glu Asn Phe Asp Asp Ile Lys Asn Gly Leu Glu
                  405                    410                    415

      Pro Thr Lys Lys Asp Ser Gln Ser Ser Val Ser Glu Asn Val Ser Asn
                  420                    425                    430

      Ser Gly Ile Asn Ser Ala Glu Ile Asp Ser Ser Gln Ile Ile Thr Ser
                  435                    440                    445

      Pro Leu Pro Ser Val Ser Ser Pro Pro Pro Ala Ser Lys Thr Lys Glu
```

```
                450                    455                    460
        Val Pro Asp Gly Glu Asn Leu Glu Gln Asp Leu Cys Thr Phe Leu Ile
        465                 470                 475                 480

        Ser Arg Ala Cys Lys Asn Ser Thr Leu Ala Asn Tyr Leu Tyr Trp Tyr
                        485                 490                 495

        Val Lys Ile Ile Phe Cys Leu Phe Ser Tyr Tyr Pro
                    500                 505
```

<210> 103
<211> 140
<212> PRT
<213> Homo sapiens

<400> 103

```
        Met Gly Asn Ala Ala Ala Ala Lys Lys Gly Ser Glu Gln Glu Ser Val
        1                   5                   10                  15

        Lys Glu Phe Leu Ala Lys Ala Lys Glu Asp Phe Leu Lys Lys Trp Glu
                        20                  25                  30

        Ser Pro Ala Gln Asn Thr Ala His Leu Asp Gln Phe Glu Arg Ile Lys
                        35                  40                  45

        Thr Leu Gly Thr Gly Ser Phe Gly Arg Val Met Leu Val Lys His Lys
                50                  55                  60

        Glu Thr Gly Asn His Tyr Ala Met Lys Ile Leu Asp Lys Gln Lys Val
        65                  70                  75                  80

        Val Lys Leu Lys Gln Ile Glu His Thr Leu Asn Glu Lys Arg Ile Leu
                        85                  90                  95

        Gln Ala Val Asn Phe Pro Phe Leu Val Lys Leu Glu Phe Ser Phe Lys
                        100                 105                 110

        Asp Asn Ser Asn Leu Tyr Met Val Met Glu Tyr Val Pro Gly Gly Glu
                    115                 120                 125

        Met Phe Ser His Leu Arg Arg Ile Gly Arg Phe Arg
            130                 135                 140
```

<210> 104
<211> 156
<212> PRT
<213> Homo sapiens

<400> 104

```
        Met Val Val Phe Asn Gly Leu Leu Lys Ile Lys Ile Cys Glu Ala Val
        1                   5                   10                  15

        Ser Leu Lys Pro Thr Ala Trp Ser Leu Arg His Ala Val Gly Pro Arg
                    20                  25                  30
```

```
Pro Gln Thr Phe Leu Leu Asp Pro Tyr Ile Ala Leu Asn Val Asp Asp
        35                  40                  45

Ser Arg Ile Gly Gln Thr Ala Thr Lys Gln Lys Thr Asn Ser Pro Ala
        50                  55                  60

Trp His Asp Glu Phe Val Thr Asp Val Cys Asn Gly Arg Lys Ile Glu
  65                  70                  75                  80

Leu Ala Val Phe His Asp Ala Pro Ile Gly Tyr Asp Asp Phe Val Ala
                85                  90                  95

Asn Cys Thr Ile Gln Phe Glu Glu Leu Leu Gln Asn Gly Ser Arg His
            100                 105                 110

Phe Glu Asp Trp Ile Asp Leu Glu Pro Glu Gly Arg Val Tyr Val Ile
            115                 120                 125

Ile Asp Leu Ser Gly Ser Ser Gly Glu Val Lys Ile Pro Asn Ser Ala
    130                 135                 140

Phe Cys Glu Arg Glu Arg Val Glu Met Arg His Ser
145                 150                 155

<210>   105
<211>   520
<212>   PRT
<213>   Homo sapiens

<400>   105

Met Ile Leu Ile Pro Arg Met Leu Leu Val Leu Phe Leu Leu Leu Pro
1               5                   10                  15

Ile Leu Ser Ser Ala Lys Ala Gln Val Asn Pro Ala Ile Cys Arg Tyr
            20                  25                  30

Pro Leu Gly Met Ser Gly Gly Gln Ile Pro Asp Glu Asp Ile Thr Ala
        35                  40                  45

Ser Ser Gln Trp Ser Glu Ser Thr Ala Ala Lys Tyr Gly Arg Leu Asp
        50                  55                  60

Ser Glu Glu Gly Asp Gly Ala Trp Cys Pro Glu Ile Pro Val Glu Pro
65                  70                  75                  80

Asp Asp Leu Lys Glu Phe Leu Gln Ile Asp Leu His Thr Leu His Phe
                85                  90                  95

Ile Thr Leu Val Gly Thr Gln Gly Arg His Ala Gly Gly His Gly Ile
            100                 105                 110

Glu Phe Ala Pro Met Tyr Lys Ile Asn Tyr Ser Arg Asp Gly Thr Arg
        115                 120                 125

Trp Ile Ser Trp Arg Asn Arg His Gly Lys Gln Val Leu Asp Gly Asn
```

```
                130                     135                     140

Ser Asn Pro Tyr Asp Ile Phe Leu Lys Asp Leu Glu Pro Pro Ile Val
145                 150                 155                 160

Ala Arg Phe Val Arg Phe Ile Pro Val Thr Asp His Ser Met Asn Val
                165                 170                 175

Cys Met Arg Val Glu Leu Tyr Gly Cys Val Trp Leu Asp Gly Leu Val
            180                 185                 190

Ser Tyr Asn Ala Pro Ala Gly Gln Gln Phe Val Leu Pro Gly Gly Ser
        195                 200                 205

Ile Ile Tyr Leu Asn Asp Ser Val Tyr Asp Gly Ala Val Gly Tyr Ser
    210                 215                 220

Met Thr Glu Gly Leu Gly Gln Leu Thr Asp Gly Val Ser Gly Leu Asp
225                 230                 235                 240

Asp Phe Thr Gln Thr His Glu Tyr His Val Trp Pro Gly Tyr Asp Tyr
                245                 250                 255

Val Gly Trp Arg Asn Glu Ser Ala Thr Asn Gly Tyr Ile Glu Ile Met
            260                 265                 270

Phe Glu Phe Asp Arg Ile Arg Asn Phe Thr Thr Met Lys Val His Cys
        275                 280                 285

Asn Asn Met Phe Ala Lys Gly Val Lys Ile Phe Lys Glu Val Gln Cys
    290                 295                 300

Tyr Phe Arg Ser Glu Ala Ser Glu Trp Glu Pro Asn Ala Ile Ser Phe
305                 310                 315                 320

Pro Leu Val Leu Asp Asp Val Asn Pro Ser Ala Arg Phe Val Thr Val
            325                 330                 335

Pro Leu His His Arg Met Ala Ser Ala Ile Lys Cys Gln Tyr His Phe
        340                 345                 350

Ala Asp Thr Trp Met Met Phe Ser Glu Ile Thr Phe Gln Ser Asp Ala
        355                 360                 365

Ala Met Tyr Asn Asn Ser Glu Ala Leu Pro Thr Ser Pro Met Ala Pro
    370                 375                 380

Thr Thr Tyr Asp Pro Met Leu Lys Val Asp Asp Ser Asn Thr Arg Ile
385                 390                 395                 400

Leu Ile Gly Cys Leu Val Ala Ile Ile Phe Ile Leu Leu Ala Ile Ile
            405                 410                 415

Val Ile Ile Leu Trp Arg Gln Phe Trp Gln Lys Met Leu Glu Lys Ala
        420                 425                 430

Ser Arg Arg Met Leu Asp Asp Glu Met Thr Val Ser Leu Ser Leu Pro
```

```
Ser Asp Ser Ser Met Phe Asn Asn Asn Arg Ser Ser Ser Pro Ser Glu
    450                 455                 460

Gln Gly Ser Asn Ser Thr Tyr Asp Arg Ile Phe Pro Leu Arg Pro Asp
465     .               470                 475                 480

Tyr Gln Glu Pro Ser Arg Leu Ile Arg Lys Leu Pro Glu Phe Ala Pro
                485                 490                 495

Gly Glu Glu Glu Ser Gly Glu Asp Asp Val Val Glu Gln Gly Val Lys
                500                 505                 510

Gly Glu Thr Ser Ala Ser Ile Arg
        515                 520
```

```
<210>   106
<211>   284
<212>   PRT
<213>   Homo sapiens

<400>   106

Met Ala Asn Phe Gln Glu His Leu Ser Cys Ser Ser Ser Pro His Leu
1               5                   10                  15

Pro Phe Ser Glu Ser Lys Thr Phe Asn Gly Leu Gln Asp Glu Leu Thr
                20                  25                  30

Ala Met Gly Asn His Pro Ser Pro Lys Leu Leu Glu Asp Gln Gln Glu
        35                  40                  45

Lys Gly Met Val Arg Thr Glu Leu Ile Glu Ser Val His Ser Pro Val
    50                  55                  60

Thr Thr Thr Val Leu Thr Ser Val Ser Glu Asp Ser Arg Asp Gln Phe
65                  70                  75                  80

Glu Asn Ser Val Leu Gln Leu Arg Glu His Asp Glu Ser Glu Thr Ala
                85                  90                  95

Val Ser Gln Gly Asn Ser Asn Thr Val Asp Gly Glu Ser Thr Ser Gly
                100                 105                 110

Thr Glu Asp Ile Lys Ile Gln Phe Ser Arg Ser Gly Ser Gly Ser Gly
        115                 120                 125

Gly Phe Leu Glu Gly Leu Phe Gly Cys Leu Arg Pro Val Trp Asn Ile
    130                 135                 140

Ile Gly Lys Ala Tyr Ser Thr Asp Tyr Lys Phe Met Gln Gln Asp Thr
145                 150                 155                 160

Trp Glu Val Pro Phe Glu Glu Ile Ser Glu Leu Gln Trp Leu Gly Ser
                165                 170                 175
```

```
Gly Ala Gln Gly Ala Val Phe Leu Gly Lys Phe Arg Ala Glu Glu Val
        180                 185                 190

Ala Ile Lys Lys Val Arg Glu Gln Asn Glu Thr Asp Ile Lys His Leu
        195                 200                 205

Arg Lys Leu Lys His Pro Asn Ile Ile Ala Phe Lys Gly Val Cys Thr
        210                 215                 220

Gln Ala Pro Cys Tyr Cys Ile Ile Met Glu Tyr Cys Ala His Gly Gln
225                 230                 235                 240

Leu Tyr Glu Val Leu Arg Ala Gly Arg Lys Ile Thr Pro Arg Leu Leu
                245                 250                 255

Val Asp Trp Ser Thr Gly Ile Ala Ser Gly Met Asn Tyr Leu His Leu
                260                 265                 270

His Lys Ile Ile His Arg Asp Leu Lys Ser Pro Lys
        275                 280
```

<210> 107
<211> 185
<212> PRT
<213> Homo sapiens

<400> 107

```
Met Cys Gly Gln Arg Trp Ile His Asn Phe Thr Cys Leu Ala Phe Leu
1               5                   10                  15

Phe His Thr Leu Lys Ser Gly Asn Lys Ser Val His Leu Arg Lys Ala
                20                  25                  30

Ser Ser Pro Asn Leu His Arg Arg Gln Trp Glu Lys Asn Val Pro Asn
        35                  40                  45

Thr Ala Leu Thr Ala Leu Glu Asn Ala Ser Ile Leu Thr Ser Ser Leu
        50                  55                  60

Thr Ala Glu Asp Asp Arg Gly Gly Ser Val Ile Lys Tyr Ser Lys Asn
65                  70                  75                  80

Thr Thr Arg Lys Gln Trp Leu Lys Glu Thr Pro Asp Thr Leu Leu Asn
                85                  90                  95

Ile Leu Lys Asn Ala Asp Leu Ser Leu Ala Phe Gln Thr Tyr Thr Ile
                100                 105                 110

Tyr Arg Pro Gly Ser Glu Gly Phe Leu Lys Gly Pro Leu Ser Glu Glu
        115                 120                 125

Thr Glu Ala Ser Asp Ser Val Asp Gly Gly His Asp Ser Val Ile Leu
        130                 135                 140

Asp Pro Glu Arg Leu Glu Pro Gly Leu Asp Glu Glu Asp Thr Asp Phe
145                 150                 155                 160
```

Glu Glu Glu Asp Asp Asn Pro Asp Trp Val Ser Glu Leu Lys Lys Arg
                165   170   175

Ala Gly Trp Gln Gly Leu Cys Asp Arg
            180   185

<210>   108
<211>   83
<212>   PRT
<213>   Homo sapiens

<400>   108

Met Ala Pro Pro Ser Glu Glu Thr Pro Leu Ile Pro Gln Arg Ser Cys
1   5   10   15

Ser Leu Leu Ser Thr Glu Ala Gly Ala Leu His Val Leu Leu Pro Ala
            20   25   30

Arg Gly Pro Gly Pro Pro Gln Arg Leu Ser Phe Ser Phe Gly Val Pro
            35   40   45

Val Arg Pro Val Gly Ala Asn Gly Pro Pro Leu Thr Ser Gly Phe Leu
        50   55   60

Gly Gly Trp Ala Glu Ala Ser Val Gln Arg Gly Leu Trp Lys Cys Leu
65   70   75   80

Leu Thr Glu

<210>   109
<211>   213
<212>   PRT
<213>   Homo sapiens

<400>   109

Met Ala Glu Ser Ala Gly Ala Ser Ser Phe Phe Pro Leu Val Val Leu
1   5   10   15

Leu Leu Ala Gly Ser Gly Gly Ser Gly Pro Arg Gly Val Gln Ala Leu
            20   25   30

Leu Cys Ala Cys Thr Ser Cys Leu Gln Ala Asn Tyr Thr Cys Glu Thr
            35   40   45

Asp Gly Ala Cys Met Val Ser Ile Phe Asn Leu Asp Gly Met Glu His
        50   55   60

His Val Arg Thr Cys Ile Pro Lys Val Glu Leu Val Pro Ala Gly Lys
65   70   75   80

Pro Phe Tyr Cys Leu Ser Ser Glu Asp Leu Arg Asn Thr His Cys Cys
            85   90   95

```
Tyr Thr Asp Tyr Cys Asn Arg Ile Asp Leu Arg Val Pro Ser Gly His
        100                 105                 110

Leu Lys Glu Pro Glu His Pro Ser Met Trp Gly Pro Val Glu Leu Val
        115                 120                 125

Gly Ile Ile Ala Gly Pro Val Phe Leu Leu Phe Leu Ile Ile Ile Ile
        130                 135                 140

Val Phe Leu Val Ile Asn Tyr His Gln Arg Val Tyr His Asn Arg Gln
145                 150                 155                 160

Arg Leu Asp Met Glu Asp Pro Ser Cys Glu Met Cys Leu Ser Lys Asp
                165                 170                 175

Lys Thr Leu Gln Asp Leu Val Tyr Asp Leu Ser Thr Ser Gly Ser Gly
            180                 185                 190

Ser Gly Thr Lys Phe Phe Arg Ala Ser Cys Leu Trp Leu Ala Phe Ile
            195                 200                 205

Ser Phe Pro Ala Gly
    210

<210>   110
<211>   383
<212>   PRT
<213>   Homo sapiens

<400>   110

Met Asp Glu Gln Glu Ala Leu Asn Ser Ile Met Asn Asp Leu Val Ala
1                   5                   10                  15

Leu Gln Met Asn Arg Arg His Arg Met Pro Gly Tyr Glu Thr Met Lys
                20                  25                  30

Asn Lys Asp Thr Gly His Ser Asn Arg Gln Ser Asp Val Arg Ile Lys
            35                  40                  45

Phe Glu His Asn Gly Glu Arg Arg Ile Ile Ala Phe Ser Arg Pro Val
        50                  55                  60

Lys Tyr Glu Asp Val Glu His Lys Val Thr Thr Val Phe Gly Gln Pro
65                  70                  75                  80

Leu Asp Leu His Tyr Met Asn Asn Glu Leu Ser Ile Leu Leu Lys Asn
                85                  90                  95

Gln Asp Asp Leu Asp Lys Ala Ile Asp Ile Leu Asp Arg Ser Ser Ser
            100                 105                 110

Met Lys Ser Leu Arg Ile Leu Leu Leu Ser Gln Asp Arg Asn His Asn
        115                 120                 125

Ser Ser Ser Pro His Ser Glu Val Ser Arg Gln Val Arg Ile Lys Ala
        130                 135                 140
```

Ser Gln Ser Ala Gly Asp Ile Asn Thr Ile Tyr Gln Pro Pro Glu Pro
145   150   155   160

Arg Ser Arg His Leu Ser Val Ser Ser Gln Asn Pro Gly Arg Ser Ser
                165   170   175

Pro Pro Pro Gly Tyr Val Pro Glu Arg Gln Gln His Ile Ala Arg Gln
                180   185   190

Gly Ser Tyr Thr Ser Ile Asn Ser Glu Gly Glu Phe Ile Pro Glu Thr
                195   200   205

Ser Glu Gln Cys Met Leu Asp Pro Leu Ser Ser Ala Glu Asn Ser Leu
        210   215   220

Ser Gly Ser Cys Gln Ser Leu Asp Arg Ser Ala Asp Ser Pro Ser Phe
225   230   235   240

Arg Lys Ser Arg Met Ser Arg Ala Gln Ser Phe Pro Asp Asn Arg Gln
                245   250   255

Glu Tyr Ser Asp Arg Glu Thr Gln Leu Tyr Asp Lys Gly Val Lys Gly
                260   265   270

Gly Thr Tyr Pro Arg Arg Tyr His Val Ser Val His His Lys Asp Tyr
                275   280   285

Ser Asp Gly Arg Arg Thr Phe Pro Arg Ile Arg Arg His Gln Gly Asn
        290   295   300

Leu Phe Thr Leu Val Pro Ser Ser Arg Ser Leu Ser Thr Asn Gly Glu
305   310   315   320

Asn Met Gly Leu Ala Val Gln Tyr Leu Asp Pro Arg Gly Arg Leu Arg
                325   330   335

Ser Ala Asp Ser Glu Asn Ala Leu Ser Val Gln Glu Arg Asn Val Pro
                340   345   350

Thr Lys Cys Glu Glu Leu Ser Leu Ala Arg Arg Arg Leu Pro Arg Trp
                355   360   365

Ser Gln Thr Ser Tyr Gly Gly Lys Gln Leu Gly Pro Trp Asp Pro
        370   375   380

<210> 111
<211> 414
<212> PRT
<213> Homo sapiens

<400> 111

Met Asp Glu Gln Glu Ala Leu Asn Ser Ile Met Asn Asp Leu Val Ala
1   5   10   15

Leu Gln Met Asn Arg Arg His Arg Met Pro Gly Tyr Glu Thr Met Lys

Asn Lys Asp Thr Gly His Ser Asn Arg Gln Lys Lys His Asn Ser Ser
        35   40   45

Ser Ser Ala Leu Leu Asn Ser Pro Thr Val Thr Thr Ser Ser Cys Ala
        50   55   60

Gly Ala Ser Glu Lys Lys Lys Phe Leu Ser Asp Val Arg Ile Lys Phe
65   70   75   80

Glu His Asn Gly Glu Arg Arg Ile Ile Ala Phe Ser Arg Pro Val Lys
                85   90   95

Tyr Glu Asp Val Glu His Lys Val Thr Thr Val Phe Gly Gln Pro Leu
                100   105   110

Asp Leu His Tyr Met Asn Asn Glu Leu Ser Ile Leu Leu Lys Asn Gln
        115   120   125

Asp Asp Leu Asp Lys Ala Ile Asp Ile Leu Asp Arg Ser Ser Ser Met
        130   135   140

Lys Ser Leu Arg Ile Leu Leu Leu Ser Gln Asp Arg Asn His Asn Ser
145   150   155   160

Ser Ser Pro His Ser Glu Val Ser Arg Gln Val Arg Ile Lys Ala Ser
                165   170   175

Gln Ser Ala Gly Asp Ile Asn Thr Ile Tyr Gln Pro Pro Glu Pro Arg
                180   185   190

Ser Arg His Leu Ser Val Ser Ser Gln Asn Pro Gly Arg Ser Ser Pro
                195   200   205

Pro Pro Gly Tyr Val Pro Glu Arg Gln Gln His Ile Ala Arg Gln Gly
        210   215   220

Ser Tyr Thr Ser Ile Asn Ser Glu Gly Glu Phe Ile Pro Glu Thr Ser
225   230   235   240

Glu Gln Cys Met Leu Asp Pro Leu Ser Ser Ala Glu Asn Ser Leu Ser
                245   250   255

Gly Ser Cys Gln Ser Leu Asp Arg Ser Ala Asp Ser Pro Ser Phe Arg
                260   265   270

Lys Ser Arg Met Ser Arg Ala Gln Ser Phe Pro Asp Asn Arg Gln Glu
        275   280   285

Tyr Ser Asp Arg Glu Thr Gln Leu Tyr Asp Lys Gly Val Lys Gly Gly
        290   295   300

Thr Tyr Pro Arg Arg Tyr His Val Ser Val His His Lys Asp Tyr Ser
305   310   315   320

Asp Gly Arg Arg Thr Phe Pro Arg Ile Arg Arg His Gln Gly Asn Leu

Phe Thr Leu Val Pro Ser Ser Arg Ser Leu Ser Thr Asn Gly Glu Asn
            340   345   350

Met Gly Leu Ala Val Gln Tyr Leu Asp Pro Arg Gly Arg Leu Arg Ser
            355   360   365

Ala Asp Ser Glu Asn Ala Leu Ser Val Gln Glu Arg Asn Val Pro Thr
            370   375   380

Lys Cys Glu Glu Leu Ser Leu Ala Arg Arg Arg Leu Pro Arg Trp Ser
385   390   395   400

Gln Thr Ser Tyr Gly Gly Lys Gln Leu Gly Pro Trp Asp Pro
                405   410

<210> 112
<211> 201
<212> PRT
<213> Homo sapiens

<400> 112

Met Ala Lys Gln Tyr Asp Ser Val Glu Cys Pro Phe Cys Asp Glu Val
1   5   10   15

Ser Lys Tyr Glu Lys Leu Ala Lys Ile Gly Gln Gly Thr Phe Gly Glu
            20   25   30

Val Phe Lys Ala Arg His Arg Lys Thr Gly Gln Lys Val Ala Leu Lys
            35   40   45

Lys Val Leu Met Glu Asn Glu Lys Glu Gly Phe Pro Ile Thr Ala Leu
        50   55   60

Arg Glu Ile Lys Ile Leu Gln Leu Leu Lys His Glu Asn Val Val Asn
65   70   75   80

Leu Ile Glu Ile Cys Arg Thr Lys Ala Ser Pro Tyr Asn Arg Cys Lys
                85   90   95

Gly Ser Ile Tyr Leu Val Phe Asp Phe Cys Glu His Asp Leu Ala Gly
            100   105   110

Leu Leu Ser Asn Val Leu Val Lys Phe Thr Leu Ser Glu Ile Lys Arg
            115   120   125

Val Met Gln Met Leu Leu Asn Gly Leu Tyr Tyr Asn His Asp Phe Phe
        130   135   140

Trp Ser Asp Pro Met Pro Ser Asp Leu Lys Gly Met Leu Ser Thr His
145   150   155   160

Leu Thr Ser Met Phe Glu Tyr Leu Ala Pro Pro Arg Arg Lys Gly Ser
                165   170   175

Gln Ile Thr Gln Gln Ser Thr Asn Gln Ser Arg Asn Pro Ala Thr Thr
            180   185   190

Asn Gln Thr Glu Phe Glu Arg Val Phe
        195   200

<210> 113
<211> 125
<212> PRT
<213> Homo sapiens

<400> 113

Met Ala Thr Ser Arg Tyr Glu Pro Val Ala Glu Ile Gly Val Gly Ala
1   5   10   15

Tyr Gly Thr Val Tyr Lys Ala Arg Asp Pro His Ser Gly His Phe Cys
            20   25   30

Ala Leu Lys Ser Val Arg Val Pro Asn Gly Gly Gly Gly Gly Gly Gly
            35   40   45

Leu Pro Ile Ser Thr Val Arg Glu Val Ala Leu Leu Arg Arg Leu Glu
        50   55   60

Ala Phe Glu His Pro Asn Val Val Arg Leu Met Asp Val Cys Ala Thr
65   70   75   80

Ser Arg Thr Asp Arg Glu Ile Lys Val Thr Leu Val Phe Glu His Val
            85   90   95

Asp Gln Asp Leu Arg Thr Tyr Leu Asp Lys Ala Pro Pro Pro Gly Leu
            100   105   110

Pro Ala Glu Thr Ile Lys Val Ser Gly Val Gly Arg His
        115   120   125

<210> 114
<211> 45
<212> PRT
<213> Homo sapiens

<400> 114

Met Ala Thr Ser Arg Tyr Glu Pro Val Ala Glu Ile Gly Val Gly Ala
1   5   10   15

Tyr Gly Thr Val Tyr Lys Ala Arg Asp Pro His Ser Gly His Phe Cys
            20   25   30

Ala Leu Lys Ser Val Arg Val Pro Thr His Leu Ser Phe
            35   40   45

<210> 115
<211> 160
<212> PRT
<213> Homo sapiens

<400> 115

Met Gly Val Cys Pro Gly Lys Thr Pro Phe Cys Ser Pro Lys Pro Gln
1   5   10   15

Gly Leu Ala Arg Gly His Trp Ser Arg Arg Asp Ile Cys Val Thr
            20   25   30

Gly Pro Leu Pro Leu Glu Pro Arg Ala Val Tyr Cys Lys Asp Val Leu
        35   40   45

Asp Ile Glu Gln Phe Ser Thr Val Lys Gly Val Asn Leu Asp His Thr
        50   55   60

Asp Asp Asp Phe Tyr Ser Lys Phe Ser Thr Gly Ser Val Ser Ile Pro
65   70   75   80

Trp Gln Asn Glu Met Ile Glu Thr Glu Cys Phe Lys Glu Leu Asn Val
                85   90   95

Phe Gly Pro Asn Gly Thr Leu Pro Pro Asp Leu Asn Arg Asn His Pro
            100   105   110

Pro Glu Pro Pro Lys Lys Gly Leu Leu Gln Arg Leu Phe Lys Arg Gln
        115   120   125

His Gln Asn Asn Ser Lys Ser Ser Pro Ser Ser Lys Thr Ser Phe Asn
        130   135   140

His His Ile Asn Ser Asn His Val Ser Ser Asn Ser Thr Gly Ser Ser
145   150   155   160

<210>   116
<211>   300
<212>   PRT
<213>   Homo sapiens

<220>
<221>   -
<222>   (1)..(300)
<223>   "XAA" can be any amino acid

<400>   116

Met Pro Arg Ala Arg Met Pro Xaa Pro Arg Ala His Ser Lys Ala Gly
1   5   10   15

Cys Pro Cys Gly Cys Pro Arg Asp Pro Leu Thr Leu Leu Ser Pro Ser
            20   25   30

Gly His Ile Arg Ile Ser Asp Leu Gly Leu Ala Val Lys Ile Pro Glu
        35   40   45

Gly Asp Leu Ile Arg Gly Arg Val Gly Thr Val Gly Tyr Met Ala Pro
    50   55   60

```
Glu Val Leu Asn Asn Gln Arg Tyr Gly Leu Ser Pro Asp Tyr Trp Gly
65                  70                  75                  80

Leu Gly Cys Leu Ile Tyr Glu Met Ile Glu Gly Gln Ser Pro Phe Arg
                85                  90                  95

Gly Arg Lys Glu Lys Val Lys Arg Glu Glu Val Asp Arg Arg Val Leu
            100                 105                 110

Glu Thr Glu Glu Val Tyr Ser His Lys Phe Ser Glu Glu Ala Lys Ser
        115                 120                 125

Ile Cys Lys Met Leu Leu Thr Lys Asp Ala Lys Gln Arg Leu Gly Cys
    130                 135                 140

Gln Glu Glu Gly Ala Ala Glu Val Lys Arg His Pro Phe Phe Arg Asn
145                 150                 155                 160

Met Asn Phe Lys Arg Leu Glu Ala Gly Met Leu Asp Pro Pro Phe Val
                165                 170                 175

Pro Asp Pro Arg Ala Val Tyr Cys Lys Asp Val Leu Asp Ile Glu Gln
            180                 185                 190

Phe Ser Thr Val Lys Gly Val Asn Leu Asp His Thr Asp Asp Asp Phe
        195                 200                 205

Tyr Ser Lys Phe Ser Thr Gly Ser Val Ser Ile Pro Trp Gln Asn Glu
    210                 215                 220

Met Ile Glu Thr Glu Cys Phe Lys Glu Leu Asn Val Phe Gly Pro Asn
225                 230                 235                 240

Gly Thr Leu Pro Pro Asp Leu Asn Arg Asn His Pro Pro Glu Pro Pro
            245                 250                 255

Lys Lys Gly Leu Leu Gln Arg Leu Phe Lys Arg Gln His Gln Asn Asn
            260                 265                 270

Ser Lys Ser Ser Pro Ser Ser Lys Thr Ser Phe Asn His His Ile Asn
    275                 280                 285

Ser Asn His Val Ser Ser Asn Ser Thr Gly Ser Ser
    290                 295                 300

<210>   117
<211>   169
<212>   PRT
<213>   Homo sapiens

<220>
<221>   -
<222>   (1)..(169)
<223>   "XAA" can be any amino acid
```

<400> 117

```
Met Arg Met Pro Arg Ala Arg Met Pro Xaa Pro Arg Ala His Ser Lys
1               5                   10                  15

Ala Gly Cys Pro Cys Gly Cys Pro Arg Asp Pro Leu Thr Leu Leu Ser
            20                  25                  30

Pro Ser Gly His Ile Arg Ile Ser Asp Leu Gly Leu Ala Val Lys Ile
            35                  40                  45

Pro Glu Gly Asp Leu Ile Arg Gly Arg Val Gly Thr Val Gly Tyr Met
        50                  55                  60

Ala Pro Glu Val Leu Asn Asn Gln Arg Tyr Gly Leu Ser Pro Asp Tyr
65                  70                  75                  80

Trp Gly Leu Gly Cys Leu Ile Tyr Glu Met Ile Glu Gly Gln Ser Pro
            85                  90                  95

Phe Arg Gly Arg Lys Glu Lys Val Lys Arg Glu Glu Val Asp Arg Arg
            100                 105                 110

Val Leu Glu Thr Glu Glu Val Tyr Ser His Lys Phe Ser Glu Glu Ala
            115                 120                 125

Lys Ser Ile Cys Lys Met Val Ser Ser Trp Trp Pro Asp Ala Thr Leu
        130                 135                 140

Lys Leu Val Ala Pro Ser Leu Gly Leu Ala Pro Val Cys Pro Gln Asn
145                 150                 155                 160

Ser Lys Gln Ala Glu Gly Thr Gly Val
                    165
```

<210> 118
<211> 319
<212> PRT
<213> Homo sapiens

<400> 118

```
Met Ala Pro Phe Leu Arg Ile Ala Phe Asn Ser Tyr Glu Leu Gly Ser
1               5                   10                  15

Leu Gln Ala Glu Asp Glu Ala Asn Gln Pro Phe Cys Ala Val Lys Met
            20                  25                  30

Lys Glu Ala Leu Ser Thr Glu Arg Gly Lys Thr Leu Val Gln Lys Lys
            35                  40                  45

Pro Thr Met Tyr Pro Glu Trp Lys Ser Thr Phe Asp Ala His Ile Tyr
        50                  55                  60

Glu Gly Arg Val Ile Gln Ile Val Leu Met Arg Ala Ala Glu Glu Pro
65                  70                  75                  80
```

```
Val Ser Glu Val Thr Val Gly Val Ser Val Leu Ala Glu Arg Cys Lys
                85              90                  95

Lys Asn Asn Gly Lys Ala Glu Phe Trp Leu Asp Leu Gln Pro Gln Ala
            100             105             110

Lys Val Leu Met Ser Val Gln Tyr Phe Leu Glu Asp Val Asp Cys Lys
        115             120             125

Gln Ser Met Arg Ser Glu Asp Glu Ala Lys Phe Pro Thr Met Asn Arg
    130             135             140

Arg Gly Ala Ile Lys Gln Ala Lys Ile His Tyr Ile Lys Asn His Glu
145             150             155             160

Phe Ile Ala Thr Phe Phe Gly Gln Pro Thr Phe Cys Ser Val Cys Lys
            165             170             175

Asp Phe Val Trp Gly Leu Asn Lys Gln Gly Tyr Lys Cys Arg Gln Cys
            180             185             190

Asn Ala Ala Ile His Lys Lys Cys Ile Asp Lys Ile Ile Gly Arg Cys
            195             200             205

Thr Gly Thr Ala Ala Asn Ser Arg Asp Thr Ile Phe Gln Lys Glu Arg
    210             215             220

Phe Asn Ile Asp Met Pro His Arg Phe Lys Val His Asn Tyr Met Ser
225             230             235             240

Pro Thr Phe Cys Asp His Cys Gly Ser Leu Leu Leu Pro Ala Pro His
            245             250             255

Asp Lys His Gln Trp Asp Cys Gly Asp Phe Cys Cys Trp Pro Arg Pro
            260             265             270

Cys Pro Gln Ser Val Leu Gly Cys Arg Leu Ala Gly Leu Ser Trp Tyr
    275             280             285

Phe Leu Cys Glu Leu Cys Val Asn Leu Leu Phe Leu Cys Leu Arg Arg
    290             295             300

Glu Ile Val Asn Pro Val Phe His Tyr Leu Asn Val Val Ile Tyr
305             310             315

<210>   119
<211>   236
<212>   PRT
<213>   Homo sapiens

<400>   119

Met Asp Glu Thr His Pro Gly Tyr Gly Lys Glu Val Asp Leu Glu Phe
1               5               10              15

Leu Val Ser Pro Ser Leu Pro Cys Leu Leu Ser Phe Ala Gly Ser Ala
            20              25              30
```

```
tcgccgttgt tctgtctcgt gccgccgccc tgggctgcat tgggttggtg gcccacgccg   1080

gccaactcac cgcagtctgg cgccgcccag gagccgcccg cgctccctga accctagaac   1140

tgtcttcgac tccggggccc cgttggaaga ctgagtgccc ggggcacggc acagaagccg   1200

cgcccaccgc ctgccagttc acaaccgctc cgagcgtggg tctccgccca gctccagtcc   1260

tgtgatccgg gcccgccccc tagcggccgg ggagggaggg gccgggtccg cggccggcga   1320

acggggctcg aagggtcctt gtagccggga atgctgctgc tgctgctgct gctgctgctg   1380

ctgctggggg gatcacagac catttctttc tttcggccag gctgaggccc tgacgtggat   1440

gggcaaactg caggcctggg aaggcagcaa gccgggccgt ccgtgttcca tcctccacgc   1500

acccccacct atcgttggtt cgcaaagtgc aaagctttct tgtgcatgac gccctgctct   1560

ggggagcgtc tggcgcgatc tctgcctgct tactcgggaa atttgctttt gccaaacccg   1620

cttttcgggg atcccgcgc cccctcctc acttgcgctg ctctcggagc cccagccggc   1680

tccgcccgct tcggcggttt ggatatttat tgacctcgtc ctccgactcg ctgacaggct   1740

acaggacccc caacaacccc aatccacgtt ttggatgcac tgagaccccg acattcctcg   1800

gtatttattg tctgtcccca cctaggaccc ccacccccga ccctcgcgaa taaaaggccc   1860

tccatctgcc caaagctytg gactccacag tgtccgcggt ttgcgttgtg ggccggaggc   1920

tccgcagcgg gccaatccgg aggcgtgtgg aggcggccga aggtctggga ggagctagcg   1980

ggatgcgaag cggccgaatc agggttgggg gaggaaaagc cacggggcgg ggctttggcg   2040

tccggccaat aggagggcga gcgggccacc cggaggcacc gcccccgccc agctgtggcc   2100

cagctgtgcc accgagcgtc gagaagaggg ggctgggctg gcagcgcgcg cggccatcct   2160

ccttccactg cgcctgcgca cgccacgcgc atccg                              2195


<210>   61
<211>   1662
<212>   DNA
<213>   Homo sapiens

<400>   61
ckwkkttact tcagacatgg gacggtctct gtagttacag tggggcatta agtaagggtg     60

tgtgtgttgc tggggatctg agaagtcgat ctttgagctg agcgctggtg aaggagaaac    120

aagccatgga aggaaaggtg ccaagtggtc aggcgagagc ctccagggca aaggccttgg    180

gcaggtggga atcctgattt gttcctcagt caactacgcg aggcagaggc tcggaaccgg    240

gacctagagg cacacgtccg gcagttgcag gagcggatgg agttgctgca ggcagaggga    300
```

Arg His Leu Val Pro Pro Asp Ser Asn Leu Phe Ser Lys Leu Trp Ala
        35   40   45

Cys Gly Val Ile Leu Phe Thr Leu Leu Ala Gly Ser Pro Pro Phe Trp
        50   55   60

His Arg Arg Gln Ile Leu Met Leu Arg Met Ile Met Glu Gly Gln Tyr
65   70   75   80

Gln Phe Ser Ser Pro Glu Trp Asp Asp Arg Ser Ser Thr Val Lys Asp
                85   90   95

Leu Ile Ser Arg Leu Leu Gln Val Asp Pro Glu Ala Arg Leu Thr Ala
                100   105   110

Glu Gln Ala Leu Gln His Pro Phe Phe Glu Arg Cys Glu Gly Ser Gln
        115   120   125

Pro Trp Asn Leu Thr Pro Arg Gln Arg Phe Arg Val Ala Val Trp Thr
        130   135   140

Val Leu Ala Ala Gly Arg Val Ala Leu Ser Thr His Arg Val Arg Pro
145   150   155   160

Leu Thr Lys Asn Ala Leu Leu Arg Asp Pro Tyr Ala Leu Arg Ser Val
                165   170   175

Arg His Leu Ile Asp Asn Cys Ala Phe Arg Leu Tyr Gly His Trp Val
                180   185   190

Lys Lys Gly Glu Gln Gln Asn Arg Ala Ala Leu Phe Gln His Arg Pro
        195   200   205

Pro Gly Pro Phe Pro Ile Met Gly Pro Glu Glu Glu Gly Asp Ser Ala
        210   215   220

Ala Ile Thr Glu Asp Glu Ala Val Leu Val Leu Gly
225   230   235

<210>   120
<211>   572
<212>   PRT
<213>   Homo sapiens

<400>   120

Met Ala Phe Cys Ala Lys Met Arg Ser Ser Lys Lys Thr Glu Val Asn
1   5   10   15

Leu Glu Ala Pro Glu Pro Gly Val Glu Val Ile Phe Tyr Leu Ser Asp
                20   25   30

Arg Glu Pro Leu Arg Leu Gly Ser Gly Glu Tyr Thr Ala Glu Glu Leu
        35   40   45

Cys Ile Arg Ala Ala Gln Ala Cys Arg Ile Ser Pro Leu Cys His Asn

Leu Phe Ala Leu Tyr Asp Glu Asn Thr Lys Leu Trp Tyr Ala Pro Asn
65   70   75   80

Arg Thr Ile Thr Val Asp Asp Lys Met Ser Leu Arg Leu His Tyr Arg
                 85   90   95

Met Arg Phe Tyr Phe Thr Asn Trp His Gly Thr Asn Asp Asn Glu Gln
             100   105   110

Ser Val Trp Arg His Ser Pro Lys Lys Gln Lys Asn Gly Tyr Glu Lys
             115   120   125

Lys Lys Ile Pro Asp Ala Thr Pro Leu Leu Asp Ala Ser Ser Leu Glu
             130   135   140

Tyr Leu Phe Ala Gln Gly Gln Tyr Asp Leu Val Lys Cys Leu Ala Pro
145   150   155   160

Ile Arg Asp Pro Lys Thr Glu Gln Asp Gly His Asp Ile Glu Asn Glu
                 165   170   175

Cys Leu Gly Met Ala Val Leu Ala Ile Ser His Tyr Ala Met Met Lys
             180   185   190

Lys Met Gln Leu Pro Glu Leu Pro Lys Asp Ile Ser Tyr Lys Arg Tyr
             195   200   205

Ile Pro Glu Thr Leu Asn Lys Ser Ile Arg Gln Arg Asn Leu Leu Thr
             210   215   220

Arg Met Arg Ile Asn Asn Val Phe Lys Asp Phe Leu Lys Glu Phe Asn
225   230   235   240

Asn Lys Thr Ile Cys Asp Ser Ser Val Ser Thr His Asp Leu Lys Val
                 245   250   255

Lys Tyr Leu Ala Thr Leu Glu Thr Leu Thr Lys His Tyr Gly Ala Glu
             260   265   270

Ile Phe Glu Thr Ser Met Leu Leu Ile Ser Ser Glu Asn Glu Met Asn
             275   280   285

Trp Phe His Ser Asn Asp Gly Gly Asn Val Leu Tyr Tyr Glu Val Met
             290   295   300

Val Thr Gly Asn Leu Gly Ile Gln Trp Arg His Lys Pro Asn Val Val
305   310   315   320

Ser Val Glu Lys Glu Lys Asn Lys Leu Lys Arg Lys Lys Leu Glu Asn
                 325   330   335

Lys Asp Lys Lys Asp Glu Glu Lys Asn Lys Ile Arg Glu Glu Trp Asn
             340   345   350

Asn Phe Ser Phe Phe Pro Glu Ile Thr His Ile Val Ile Lys Glu Ser

Val Val Ser Ile Asn Lys Gln Asp Asn Lys Lys Met Glu Leu Lys Leu
        370   375   380

Ser Ser His Glu Glu Ala Leu Ser Phe Val Ser Leu Val Asp Gly Tyr
385   390   395   400

Phe Arg Leu Thr Ala Asp Ala His His Tyr Leu Cys Thr Asp Val Ala
                405   410   415

Pro Pro Leu Ile Val His Asn Ile Gln Asn Gly Cys His Gly Pro Ile
                420   425   430

Cys Thr Glu Tyr Ala Ile Asn Lys Leu Arg Gln Glu Gly Ser Glu Glu
                435   440   445

Gly Met Tyr Val Leu Arg Trp Ser Cys Thr Asp Phe Asp Asn Ile Leu
        450   455   460

Met Thr Val Thr Cys Phe Glu Lys Ser Glu Gln Val Gln Gly Ala Gln
465   470   475   480

Lys Gln Phe Lys Asn Phe Gln Ile Glu Val Gln Lys Gly Arg Tyr Ser
                485   490   495

Leu His Gly Ser Asp Arg Ser Phe Pro Ser Leu Gly Asp Leu Met Ser
                500   505   510

His Leu Lys Lys Gln Ile Leu Arg Thr Asp Asn Ile Ser Phe Met Leu
                515   520   525

Lys Arg Cys Cys Gln Pro Lys Pro Arg Gly Ser Leu Pro Val Pro Glu
        530   535   540

Pro Gly Cys Ile Pro Ser Val Ile Ala Glu Thr Gln Ile Asp Gln Asn
545   550   555   560

Thr Leu Thr Asp Leu Asn Lys Val Asp Pro Pro Pro
                565   570

<210> 121
<211> 311
<212> PRT
<213> Homo sapiens

<400> 121

Met Gly Cys Val Gln Cys Lys Asp Lys Glu Ala Thr Lys Leu Thr Glu
1   5   10   15

Glu Arg Asp Gly Ser Leu Asn Gln Ser Ser Gly Tyr Arg Tyr Gly Thr
                20   25   30

Asp Pro Thr Pro Gln His Tyr Pro Ser Phe Gly Val Thr Ser Ile Pro
                35   40   45

Asn Tyr Asn Asn Phe His Ala Ala Gly Gly Gln Gly Leu Thr Val Phe
    50   55   60

Gly Gly Val Asn Ser Ser Ser His Thr Gly Thr Leu Arg Thr Arg Gly
 65   70   75   80

Gly Thr Gly Val Thr Leu Phe Val Ala Leu Tyr Asp Tyr Glu Ala Arg
                85   90   95

Thr Glu Asp Asp Leu Ser Phe His Lys Gly Glu Lys Phe Gln Ile Leu
            100   105   110

Asn Ser Ser Glu Gly Asp Trp Trp Glu Ala Arg Ser Leu Thr Thr Gly
            115   120   125

Glu Thr Gly Tyr Ile Pro Ser Asn Tyr Val Ala Pro Val Asp Ser Ile
    130   135   140

Gln Ala Glu Glu Trp Tyr Phe Gly Lys Leu Gly Arg Lys Asp Ala Glu
145   150   155   160

Arg Gln Leu Leu Ser Phe Gly Asn Pro Arg Gly Thr Phe Leu Ile Arg
                165   170   175

Glu Ser Glu Thr Thr Lys Gly Ala Tyr Ser Leu Ser Ile Arg Asp Trp
            180   185   190

Asp Asp Met Lys Gly Asp His Val Lys His Tyr Lys Ile Arg Lys Leu
            195   200   205

Asp Asn Gly Gly Tyr Tyr Ile Thr Thr Arg Ala Gln Phe Glu Thr Leu
    210   215   220

Gln Gln Leu Val Gln His Tyr Ser Glu Arg Ala Ala Gly Leu Cys Cys
225   230   235   240

Arg Leu Val Val Pro Cys His Lys Gly Met Pro Arg Leu Thr Asp Leu
                245   250   255

Ser Val Lys Thr Lys Asp Val Trp Glu Ile Pro Arg Glu Ser Leu Gln
            260   265   270

Leu Ile Lys Arg Leu Gly Asn Gly Gln Phe Gly Glu Val Trp Met Gly
            275   280   285

Met Leu Arg Leu Asn Tyr Ser Leu Ile Ser Phe Pro Val Trp Lys Ile
    290   295   300

Pro Asn Thr Lys Asp Gly Arg
305   310

<210>   122
<211>   387
<212>   PRT
<213>   Homo sapiens

<400>   122

```
Met Gly Cys Val Gln Cys Lys Asp Lys Glu Ala Thr Lys Leu Thr Glu
1               5               10              15

Glu Arg Asp Gly Ser Leu Asn Gln Ser Ser Gly Tyr Arg Tyr Gly Thr
            20                  25              30

Asp Pro Thr Pro Gln His Tyr Pro Ser Phe Gly Val Thr Ser Ile Pro
            35                  40              45

Asn Tyr Asn Asn Phe His Ala Ala Gly Gly Gln Gly Leu Thr Val Phe
        50              55                  60

Gly Gly Val Asn Ser Ser Ser His Thr Gly Thr Leu Arg Thr Arg Gly
65                  70                  75                  80

Gly Thr Gly Val Thr Leu Phe Val Ala Leu Tyr Asp Tyr Glu Ala Arg
                85                  90                  95

Thr Glu Asp Asp Leu Ser Phe His Lys Gly Glu Lys Phe Gln Ile Leu
            100                 105                 110

Asn Ser Ser Glu Gly Asp Trp Trp Glu Ala Arg Ser Leu Thr Thr Gly
        115                 120                 125

Glu Thr Gly Tyr Ile Pro Ser Asn Tyr Val Ala Pro Val Asp Ser Ile
        130                 135                 140

Gln Ala Glu Glu Trp Tyr Phe Gly Lys Leu Gly Arg Lys Asp Ala Glu
145                 150                 155                 160

Arg Gln Leu Leu Ser Phe Gly Asn Pro Arg Gly Thr Phe Leu Ile Arg
                165                 170                 175

Glu Ser Glu Thr Thr Lys Gly Ala Tyr Ser Leu Ser Ile Arg Asp Trp
            180                 185                 190

Asp Asp Met Lys Gly Asp His Val Lys His Tyr Lys Ile Arg Lys Leu
        195                 200                 205

Asp Asn Gly Gly Tyr Tyr Ile Thr Thr Arg Ala Gln Phe Glu Thr Leu
        210                 215                 220

Gln Gln Leu Val Gln His Tyr Ser Glu Arg Ala Ala Gly Leu Cys Cys
225                 230                 235                 240

Arg Leu Val Val Pro Cys His Lys Gly Met Pro Arg Leu Thr Asp Leu
                245                 250                 255

Ser Val Lys Thr Lys Asp Val Trp Glu Ile Pro Arg Glu Ser Leu Gln
            260                 265                 270

Leu Ile Lys Arg Leu Gly Asn Gly Gln Phe Gly Glu Val Trp Met Gly
        275                 280                 285

Thr Trp Asn Gly Asn Thr Lys Val Ala Ile Lys Thr Leu Lys Pro Gly
    290                 295                 300
```

Thr Met Ser Pro Glu Ser Phe Leu Glu Glu Ala Gln Ile Met Lys Lys
305   310   315   320

Leu Lys His Asp Lys Leu Val Gln Leu Tyr Ala Val Val Ser Glu Glu
                325   330   335

Pro Ile Tyr Ile Val Thr Glu Tyr Met Asn Lys Gly Trp Ala Thr Pro
                340   345   350

Leu Leu Ser Pro Ala His Ser Ala Leu Arg Gly Cys Leu Gly Glu Arg
                355   360   365

Asn Gly Ser Phe Leu Leu Ala Thr Phe Leu Val Ser Ala Trp Val Lys
            370   375   380

Tyr Ser His
385

<210>   123
<211>   516
<212>   PRT
<213>   Homo sapiens

<400>   123

Met Arg Leu Glu Leu Pro Ala Gly His Trp Glu Arg Pro Asp Leu Glu
1   5   10   15

Leu Leu Glu Lys Ser Thr Gln Gln Gly Arg Ala Trp Asp Leu Glu Leu
            20   25   30

Leu Glu Lys Gly Ala Gly Ser Leu Pro Leu Tyr Val Trp Lys Val Ser
            35   40   45

Leu Ser Leu Leu Glu Leu His Lys Arg Arg Lys Ala Leu Thr Glu Pro
        50   55   60

Glu Ala Arg Tyr Tyr Leu Arg Gln Ile Val Leu Gly Cys Gln Tyr Leu
65   70   75   80

His Arg Asn Arg Val Ile His Arg Asp Leu Lys Leu Gly Asn Leu Phe
                85   90   95

Leu Asn Glu Asp Leu Glu Val Lys Ile Gly Asp Phe Gly Leu Ala Thr
            100   105   110

Lys Val Glu Tyr Asp Gly Glu Arg Lys Lys Thr Leu Cys Gly Thr Pro
            115   120   125

Asn Tyr Ile Ala Pro Glu Val Leu Ser Lys Lys Gly His Ser Phe Glu
            130   135   140

Val Asp Val Trp Ser Ile Gly Cys Ile Met Tyr Thr Leu Leu Val Gly
145   150   155   160

Lys Pro Pro Phe Glu Thr Ser Cys Leu Lys Glu Thr Tyr Leu Arg Ile

Lys Lys Asn Glu Tyr Ser Ile Pro Lys His Ile Asn Pro Val Ala Ala
        180   185   190

Ser Leu Ile Gln Lys Met Leu Gln Thr Asp Pro Thr Ala Arg Pro Thr
        195   200   205

Ile Asn Glu Leu Leu Asn Asp Glu Phe Phe Thr Ser Gly Tyr Ile Pro
    210   215   220

Ala Arg Leu Pro Ile Thr Cys Leu Thr Ile Pro Pro Arg Phe Ser Ile
225   230   235   240

Ala Pro Ser Ser Leu Asp Pro Ser Asn Arg Lys Pro Leu Thr Val Leu
                245   250   255

Asn Lys Gly Leu Glu Asn Pro Leu Pro Glu Arg Pro Arg Glu Lys Glu
                260   265   270

Glu Pro Val Val Arg Glu Thr Gly Glu Val Val Asp Cys His Leu Ser
        275   280   285

Asp Met Leu Gln Gln Leu His Ser Val Asn Ala Ser Lys Pro Ser Glu
    290   295   300

Arg Gly Leu Val Arg Gln Glu Glu Ala Glu Asp Pro Ala Cys Ile Pro
305   310   315   320

Ile Phe Trp Val Ser Lys Trp Val Asp Tyr Ser Asp Lys Tyr Gly Leu
                325   330   335

Gly Tyr Gln Leu Cys Asp Asn Ser Val Gly Val Leu Phe Asn Asp Ser
                340   345   350

Thr Arg Leu Ile Leu Tyr Asn Asp Gly Asp Ser Leu Gln Tyr Ile Glu
        355   360   365

Arg Asp Gly Thr Glu Ser Tyr Leu Thr Val Ser Ser His Pro Asn Ser
    370   375   380

Leu Met Lys Lys Ile Thr Leu Leu Lys Tyr Phe Arg Asn Tyr Met Ser
385   390   395   400

Glu His Leu Leu Lys Ala Gly Ala Asn Ile Thr Pro Arg Glu Gly Asp
                405   410   415

Glu Leu Ala Arg Leu Pro Tyr Leu Arg Thr Trp Phe Arg Thr Arg Ser
                420   425   430

Ala Ile Ile Leu His Leu Ser Asn Gly Ser Val Gln Ile Asn Phe Phe
        435   440   445

Gln Asp His Thr Lys Leu Ile Leu Cys Pro Leu Met Ala Ala Val Thr
    450   455   460

Tyr Ile Asp Glu Lys Arg Asp Phe Arg Thr Tyr Arg Leu Ser Leu Leu

Glu Glu Tyr Gly Cys Cys Lys Glu Leu Ala Ser Arg Leu Arg Tyr Ala
                485   490   495

Arg Thr Met Val Asp Lys Leu Leu Ser Ser Arg Ser Ala Ser Asn Arg
            500   505   510

Leu Lys Ala Ser
        515

<210> 124
<211> 171
<212> PRT
<213> Homo sapiens

<220>
<221> -
<222> (1)..(171)
<223> "XAA" can be any amino acid

<400> 124

Met Ala Leu Leu Pro Pro Phe Leu Ala Ser His Arg Leu Glu Val Ser
1   5   10   15

Arg Asp Ser Gly Trp Leu Gly Gln Cys Trp Leu Gln Gly Val Trp Glu
            20   25   30

Arg Xaa Pro His Ser Gly Leu Leu Tyr Pro Leu Gln His Pro Pro Ala
        35   40   45

Glu Phe Ser Thr Tyr Leu Asn Phe Cys Arg Ser Leu Arg Phe Asp Asp
    50   55   60

Lys Pro Asp Tyr Ser Tyr Leu Arg Gln Leu Phe Arg Asn Leu Phe His
65   70   75   80

Arg Gln Gly Phe Ser Tyr Asp Tyr Val Phe Asp Trp Asn Met Leu Lys
                85   90   95

Phe Gly Ala Ser Ser Ser Gln Ala Gln Pro Arg Asp Ser Pro Met Thr
            100   105   110

Ala Lys Gly Pro Phe Cys Pro Arg Pro Cys Pro Cys Ala Gly Pro Thr
            115   120   125

Tyr Ser Pro Thr Tyr Trp Cys Pro Ala Pro Leu Gly Thr Gln Ser Pro
    130   135   140

Pro Asp Arg Pro Val Glu Glu Val Glu Glu Leu Ser Pro Gln Asn Tyr
145   150   155   160

Trp Pro Val Val Trp Thr Pro Gly Pro His Phe
                165   170

```
<210>   125
<211>   134
<212>   PRT
<213>   Homo sapiens

<400>   125

Met Ala Leu Leu Pro Pro Phe Leu Ala Ser His Arg Leu Glu Val Ser
1               5                   10                  15

Arg Asp Ser Gly Trp Leu Gly Gln Cys Trp Leu Gln Gly Val Trp Glu
            20                  25                  30

Arg Gly Leu Thr Val Ala Phe Ser Ile Leu Cys Asn Thr Leu Gln Pro
            35                  40                  45

Glu Phe Ser Thr Tyr Leu Asn Phe Cys Arg Ser Leu Arg Phe Asp Asp
        50                  55                  60

Lys Pro Asp Tyr Ser Tyr Leu Arg Gln Leu Phe Arg Asn Leu Phe His
65                  70                  75                  80

Arg Gln Gly Phe Ser Tyr Asp Tyr Val Phe Asp Trp Asn Met Leu Lys
            85                  90                  95

Phe Gly Ala Ser Ser Ser Gln Ala Gln Pro Arg Asp Ser Pro Met Thr
            100                 105                 110

Ala Lys Gly Pro Phe Cys Pro Arg Pro Cys Pro Cys Ala Gly Pro Thr
        115                 120                 125

Tyr Ser Pro Thr Tyr Trp
        130

<210>   126
<211>   233
<212>   PRT
<213>   Homo sapiens

<400>   126

Met Ala Leu Leu Pro Pro Phe Leu Ala Ser His Arg Leu Glu Val Ser
1               5                   10                  15

Arg Asp Ser Gly Trp Leu Gly Gln Cys Trp Leu Gln Gly Val Trp Glu
            20                  25                  30

Arg Gly Leu Thr Val Ala Phe Ser Ile Leu Cys Asn Thr Leu Gln Pro
            35                  40                  45

Glu Phe Ser Thr Tyr Leu Asn Phe Cys Arg Ser Leu Arg Phe Asp Asp
        50                  55                  60

Lys Pro Asp Tyr Ser Tyr Leu Arg Gln Leu Phe Arg Asn Leu Phe His
65                  70                  75                  80

Arg Gln Gly Phe Ser Tyr Asp Tyr Val Phe Asp Trp Asn Met Leu Lys
```

Phe Gly Gly Pro Leu Ser Cys Gln Pro Pro Ala Leu Pro Cys Gly Arg
            100   105   110

Pro Gln Asp Glu Leu Gly Cys Ser Pro Glu Ser Arg Gly Cys Gly Pro
            115   120   125

Gly Ala Ala Arg Thr Arg Thr Arg Gly Glu Asp Gly Ala Ala Thr Gly
    130   135   140

Val Arg Asp Pro Ser Pro Ala Pro Trp Pro Thr His Gly Gly His Cys
145   150   155   160

Gln Pro Ala Pro Gln Cys Arg Arg Ala Arg Gly Phe His Ala Ser Leu
            165   170   175

Pro His Pro Ala Gly Trp Gln Tyr Phe Ser Gln Ser Asp Leu Ala Gly
            180   185   190

Arg Pro Gly Glu Glu Gly Glu Tyr Glu Ala Ala Gln Gly Cys Ala Arg
            195   200   205

Gln Arg Leu Leu Leu Arg Pro His Trp Ala Ala Arg Gly Leu Pro Asp
    210   215   220

Pro Ser Leu Thr Asp Lys Cys Ala Ile
225   230

<210>   127
<211>   243
<212>   PRT
<213>   Homo sapiens

<400>   127

Met Ala Ala Glu Leu Asn Lys Asn Lys Lys Ala Arg Ala Ala Glu Ala
1   5   10   15

Ala Arg Ala Ala Glu Ala Ala Lys Ala Ala Glu Ala Thr Lys Ala Ala
            20   25   30

Glu Ala Ala Ala Lys Ala Ala Lys Ala Ser Asn Thr Ser Thr Pro Thr
    35   40   45

Lys Gly Asn Thr Glu Thr Ser Ala Ser Ala Ser Gln Thr Asn His Val
    50   55   60

Lys Asp Val Lys Lys Ile Lys Ile Glu His Ala Pro Ser Pro Ser Ser
65   70   75   80

Gly Gly Thr Leu Lys Asn Asp Lys Ala Lys Thr Lys Pro Pro Leu Gln
            85   90   95

Val Thr Lys Val Glu Asn Asn Leu Ile Val Asp Lys Ala Thr Lys Lys
            100   105   110

```
Ala Val Ile Val Gly Lys Glu Ser Lys Ser Ala Ala Thr Lys Glu Glu
        115             120             125

Ser Val Ser Leu Lys Glu Lys Thr Lys Pro Leu Thr Pro Ser Ile Gly
        130             135             140

Ala Lys Glu Lys Glu Gln His Val Ala Leu Val Thr Ser Thr Leu Pro
145             150             155             160

Pro Leu Pro Leu Pro Pro Met Leu Pro Glu Asp Lys Glu Ala Asp Ser
            165             170             175

Leu Arg Gly Asn Ile Ser Val Lys Ala Val Lys Lys Glu Val Glu Lys
        180             185             190

Lys Leu Arg Cys Leu Leu Ala Asp Leu Pro Leu Pro Pro Glu Leu Pro
        195             200             205

Gly Gly Asp Asp Leu Ser Lys Ser Pro Glu Glu Lys Lys Thr Ala Thr
        210             215             220

Gln Leu His Ser Lys Arg Arg Pro Lys Tyr Val Leu Ala Phe Tyr Leu
225             230             235             240

Leu Leu Asn


<210>  128
<211>  330
<212>  PRT
<213>  Homo sapiens

<400>  128

Met Ser Ala Lys Val Arg Leu Lys Lys Leu Glu Gln Leu Leu Leu Asp
1               5               10              15

Gly Pro Trp Arg Asn Glu Ser Ala Leu Ser Val Glu Thr Leu Leu Asp
            20              25              30

Val Leu Val Cys Leu Tyr Thr Glu Cys Ser His Ser Ala Leu Arg Arg
        35              40              45

Asp Lys Tyr Val Ala Glu Phe Leu Glu Trp Ala Lys Pro Phe Thr Gln
        50              55              60

Leu Val Lys Glu Met Gln Leu His Arg Glu Asp Phe Glu Ile Ile Lys
65              70              75              80

Val Ile Gly Arg Gly Ala Phe Gly Glu Val Ala Val Val Lys Met Lys
            85              90              95

Asn Thr Glu Arg Ile Tyr Ala Met Lys Ile Leu Asn Lys Trp Glu Met
            100             105             110

Leu Lys Arg Ala Glu Thr Ala Cys Phe Arg Glu Glu Arg Asp Val Leu
        115             120             125
```

Val Asn Gly Asp Cys Gln Trp Ile Thr Ala Leu His Tyr Ala Phe Gln
    130   135   140

Asp Glu Asn His Leu Tyr Leu Val Met Asp Tyr Tyr Val Gly Gly Asp
145   150   155   160

Leu Leu Thr Leu Leu Ser Lys Phe Glu Asp Lys Leu Pro Glu Asp Met
                165   170   175

Ala Arg Phe Tyr Ile Gly Glu Met Val Leu Ala Ile Asp Ser Ile His
            180   185   190

Gln Leu His Tyr Val His Arg Asp Ile Lys Pro Asp Asn Val Leu Leu
        195   200   205

Asp Val Asn Gly His Ile Arg Leu Ala Asp Phe Gly Ser Cys Leu Lys
    210   215   220

Met Asn Asp Asp Gly Thr Val Gln Ser Ser Val Ala Val Gly Thr Pro
225   230   235   240

Asp Tyr Ile Ser Pro Glu Ile Leu Gln Ala Met Glu Asp Gly Met Gly
            245   250   255

Lys Tyr Gly Pro Glu Cys Asp Trp Trp Ser Leu Gly Val Cys Met Tyr
            260   265   270

Glu Met Leu Tyr Gly Glu Thr Pro Phe Tyr Ala Glu Ser Leu Val Glu
        275   280   285

Thr Tyr Gly Lys Ile Met Asn His Glu Glu Arg Phe Gln Phe Pro Ser
    290   295   300

His Val Thr Asp Val Ser Glu Glu Ala Lys Asp Leu Ile Gln Arg Leu
305   310   315   320

Ser Cys Ile Gln Arg Thr Pro Tyr Leu Gln
            325   330

<210> 129
<211> 246
<212> PRT
<213> Homo sapiens

<400> 129

Met Ser Ala Lys Val Arg Leu Lys Lys Leu Glu Gln Leu Leu Leu Asp
1   5   10   15

Gly Pro Trp Arg Asn Glu Ser Ala Leu Ser Val Glu Thr Leu Leu Asp
            20   25   30

Val Leu Val Cys Leu Tyr Thr Glu Cys Ser His Ser Ala Leu Arg Arg
        35   40   45

Asp Lys Tyr Val Ala Glu Phe Leu Glu Trp Ala Lys Pro Phe Thr Gln

Leu Val Lys Glu Met Gln Leu His Arg Glu Asp Phe Glu Ile Ile Lys
65   70   75   80

Val Ile Gly Arg Gly Ala Phe Gly Glu Val Ala Val Val Lys Met Lys
                    85   90   95

Asn Thr Glu Arg Ile Tyr Ala Met Lys Ile Leu Asn Lys Trp Glu Met
                    100   105   110

Leu Lys Arg Ala Glu Thr Ala Cys Phe Arg Glu Glu Arg Asp Val Leu
            115   120   125

Val Asn Gly Asp Cys Gln Trp Ile Thr Ala Leu His Tyr Ala Phe Gln
            130   135   140

Asp Glu Asn His Leu Tyr Leu Val Met Asp Tyr Tyr Val Gly Gly Asp
145   150   155   160

Leu Leu Thr Leu Leu Ser Lys Phe Glu Asp Lys Leu Pro Glu Asp Met
                    165   170   175

Ala Arg Phe Tyr Ile Gly Glu Met Val Leu Ala Ile Asp Ser Ile His
                    180   185   190

Gln Leu His Tyr Val His Arg Asp Ile Lys Pro Asp Asn Val Leu Leu
            195   200   205

Asp Val Asn Gly His Ile Arg Leu Ala Asp Phe Gly Ser Cys Leu Lys
            210   215   220

Met Asn Asp Asp Gly Thr Val Gly Ile Phe Val Gly Asp Phe Pro Phe
225   230   235   240

Gly Phe Gly Phe Gly Ile
                    245

<210>   130
<211>   378
<212>   PRT
<213>   Homo sapiens

<400>   130

Met Glu Leu Arg Val Gly Asn Arg Tyr Arg Leu Gly Arg Lys Ile Gly
1   5   10   15

Ser Gly Ser Phe Gly Asp Ile Tyr Leu Val Gly Ile Pro Thr Ile Arg
                    20   25   30

Trp Cys Gly Ala Glu Gly Asp Tyr Asn Val Met Val Met Glu Leu Leu
            35   40   45

Gly Pro Ser Leu Glu Asp Leu Phe Asn Phe Cys Ser Arg Lys Phe Ser
            50   55   60

```
Leu Lys Thr Val Leu Leu Leu Ala Asp Gln Met Ile Ser Arg Ile Glu
65              70              75                      80

Tyr Ile His Ser Lys Asn Phe Ile His Arg Asp Val Lys Pro Asp Asn
            85              90                      95

Phe Leu Met Gly Leu Gly Lys Lys Gly Asn Leu Val Tyr Ile Ile Asp
            100             105             110

Phe Gly Leu Ala Lys Lys Tyr Arg Asp Ala Arg Thr His Gln His Ile
        115             120             125

Pro Tyr Arg Glu Asn Lys Asn Leu Thr Gly Thr Ala Arg Tyr Ala Ser
    130             135             140

Ile Asn Thr His Leu Gly Ile Glu Gln Ser Arg Arg Asp Asp Leu Glu
145             150             155             160

Ser Leu Gly Tyr Val Leu Met Tyr Phe Asn Leu Gly Ser Leu Pro Trp
            165             170             175

Gln Gly Leu Lys Ala Ala Thr Lys Arg Gln Lys Tyr Glu Arg Ile Ser
        180             185             190

Glu Lys Lys Met Ser Thr Pro Ile Glu Val Leu Cys Lys Gly Tyr Pro
        195             200             205

Ser Glu Phe Ala Thr Tyr Leu Asn Phe Cys Arg Ser Leu Arg Phe Asp
    210             215             220

Asp Lys Pro Asp Tyr Ser Tyr Leu Arg Gln Leu Phe Arg Asn Leu Phe
225             230             235             240

His Arg Gln Gly Phe Ser Tyr Asp Tyr Val Phe Asp Trp Asn Met Leu
            245             250             255

Lys Phe Gly Ala Ser Arg Ala Ala Asp Asp Ala Glu Arg Asp Ala Gly
        260             265             270

Asp Arg Glu Glu Arg Leu Arg His Ser Arg Asn Pro Ala Thr Arg Gly
    275             280             285

Leu Pro Ser Thr Ala Ser Gly Arg Leu Arg Gly Arg Arg Lys Val Ala
    290             295             300

Pro Pro Thr Pro Leu Thr Pro Thr Ser His Thr Ala Asn Thr Ser Pro
305             310             315             320

Arg Pro Val Ser Gly Met Glu Arg Glu Arg Lys Val Ser Met Arg Leu
            325             330             335

His Arg Gly Ala Pro Val Asn Ile Ser Ser Ser Asp Leu Thr Gly Arg
            340             345             350

Gln Asp Thr Ser Arg Met Ser Thr Ser Gln Ile Pro Gly Arg Val Ala
    355             360             365
```

Ser Ser Gly Leu Gln Ser Val Val His Arg
    370   375

<210>   131
<211>   561
<212>   PRT
<213>   Homo sapiens

<400>   131

Met Val Glu Trp Trp Ser Ala Leu Thr Cys Pro Leu Gln Thr Phe Ala
1   5   10   15

Ala Pro Ser Phe Asp Asp Lys Ile Leu Glu Val Val Ala Val Phe Gly
            20   25   30

Ser Met Gln Met Ala Val Ser Arg Val Ile Arg Leu Gln His His Arg
        35   40   45

Ile Ala Gln Cys Arg Thr Val Lys Ile Ser Ile Leu Gly Asp Glu Gly
    50   55   60

Val Pro Val Gln Val Asp Gly Glu Ala Trp Val Gln Pro Pro Gly Tyr
65   70   75   80

Ile Arg Ile Val His Lys Asn Arg Ala Gln Thr Leu Thr Arg Asp Arg
                85   90   95

Ala Phe Glu Ser Thr Leu Lys Ser Trp Glu Asp Lys Gln Lys Cys Glu
            100   105   110

Leu Pro Arg Pro Pro Ser Cys Ser Leu His Pro Glu Met Leu Ser Glu
            115   120   125

Glu Glu Ala Thr Gln Met Asp Gln Phe Gly Gln Ala Ala Gly Val Leu
        130   135   140

Ile His Ser Ile Arg Glu Ile Ala Gln Ser His Arg Asp Met Glu Gln
145   150   155   160

Glu Leu Ala His Ala Val Asn Ala Ser Ser Lys Ser Met Asp Arg Val
                165   170   175

Tyr Gly Lys Pro Arg Thr Thr Glu Gly Leu Asn Cys Ser Phe Val Leu
            180   185   190

Glu Met Val Asn Asn Phe Arg Ala Leu Arg Ser Glu Thr Glu Leu Leu
            195   200   205

Leu Ser Gly Lys Met Ala Leu Gln Leu Asp Pro Pro Gln Lys Glu Gln
    210   215   220

Leu Gly Ser Ala Leu Ala Glu Met Asp Arg Gln Leu Arg Arg Leu Ala
225   230   235   240

Asp Thr Pro Trp Leu Cys Gln Ser Ala Glu Pro Gly Asp Glu Glu Ser
                245   250   255

```
Val Met Leu Asp Leu Ala Lys Arg Ser Arg Ser Gly Lys Phe Arg Leu
        260                 265                 270

Val Thr Lys Phe Lys Lys Glu Lys Asn Asn Lys Asn Lys Glu Ala His
        275                 280                 285

Ser Ser Leu Gly Ala Pro Val His Leu Trp Gly Thr Glu Glu Val Ala
        290                 295                 300

Ala Trp Leu Glu His Leu Ser Leu Cys Glu Tyr Lys Asp Ile Phe Thr
305                 310                 315                 320

Arg His Asp Ile Arg Gly Ser Glu Leu Leu His Leu Glu Arg Arg Asp
                325                 330                 335

Leu Lys Asp Leu Gly Val Thr Lys Val Gly His Met Lys Arg Ile Leu
                340                 345                 350

Cys Gly Ile Lys Glu Leu Ser Arg Ser Ala Pro Ala Val Glu Ala Gln
                355                 360                 365

Pro Leu Ser Ser Gln Pro Val Ala Ser Thr Ser Pro Pro Pro Arg Pro
        370                 375                 380

Ser Leu Arg Pro Leu Ser Leu Trp Pro Leu Arg Leu Leu Pro Leu Arg
385                 390                 395                 400

Pro Trp Ala Asp Ala Ala Ala Arg Pro Leu Leu Met Val Leu Leu Pro
                405                 410                 415

Leu Ser Ala Thr Glu Ser Leu Arg Asp Thr Val His Gln Ser Ser Gly
                420                 425                 430

Val Ser Asn Ile Thr Thr Gln Leu Pro Leu Lys Gln His Phe Leu Gln
                435                 440                 445

Leu Arg Val Thr Trp Gly Thr Cys Val Thr Ala Thr Gln Leu Ser Pro
        450                 455                 460

Ala Cys Ala Val Gly Gln Gly Ile Gln Arg Arg Leu Ala Ser Trp Ala
465                 470                 475                 480

Leu Leu Ala Trp Pro Arg Ala Trp Ile Val Pro Gly Ala Pro Leu Arg
                485                 490                 495

Val Ser Phe Cys Gly Arg Thr Val Trp Leu Arg Leu Leu Ala Pro Ser
                500                 505                 510

Gln Phe Ser Glu Thr Trp Leu Gly Pro Ser Thr Ala Ala Cys Lys Gly
        515                 520                 525

Pro Cys Leu Leu Met Gln Leu Leu Leu Asn Lys Asn Arg Ala Leu Ser
        530                 535                 540

Trp Phe Glu Ser Ser Met Asp Val Ser Ser Leu Val Asp Cys Asn Leu
545                 550                 555                 560
```

Thr

<210> 132
<211> 213
<212> PRT
<213> Homo sapiens

<400> 132

Met Ser Asp Val Ala Ile Val Lys Glu Gly Trp Leu His Lys Arg Gly
1   5   10   15

Glu Tyr Ile Lys Thr Trp Arg Pro Arg Tyr Phe Leu Leu Lys Asn Asp
            20   25   30

Gly Thr Phe Ile Gly Tyr Lys Glu Arg Pro Gln Asp Val Asp Gln Arg
        35   40   45

Glu Ala Pro Leu Asn Asn Phe Ser Val Ala Gln Cys Gln Leu Met Lys
    50   55   60

Thr Glu Arg Pro Arg Pro Asn Thr Phe Ile Ile Arg Cys Leu Gln Trp
65   70   75   80

Thr Thr Val Ile Glu Arg Thr Phe His Val Glu Thr Pro Glu Glu Arg
            85   90   95

Glu Glu Trp Thr Thr Ala Ile Gln Thr Val Ala Asp Gly Leu Lys Lys
            100   105   110

Gln Glu Glu Glu Glu Met Asp Phe Arg Ser Gly Ser Pro Ser Asp Asn
        115   120   125

Ser Gly Ala Glu Glu Met Glu Val Ser Leu Ala Lys Pro Lys His Arg
    130   135   140

Val Ala Leu Gly Gly Arg Ala Gly Pro Ala His Val Ser Pro His Ser
145   150   155   160

Val Ser Gln Pro Pro Trp Ala Val Cys His Gln Leu Ser Val Ile Ser
            165   170   175

Leu Gly Pro Trp Ala Ser Val Gln Pro Gly Gly Thr Arg Cys Asn Leu
            180   185   190

Thr Met Val Cys Trp Pro Ala Pro Ser Pro Gly Gly Gly Arg His Thr
            195   200   205

Ala Ala Pro Gln His
    210

<210> 133
<211> 425
<212> PRT
<213> Homo sapiens

<400> 133

```
Met Ile Val His Asp Asp Val Glu Ser Glu Pro Ala Met Thr Pro Ser
1               5                   10                  15

Lys Glu Gly Thr Leu Ile Val Arg Gln Thr Gln Ser Ala Ser Ser Thr
                20                  25                  30

Leu Gln Lys His Lys Ser Ser Ser Ser Phe Thr Pro Phe Ile Asp Pro
                35                  40                  45

Arg Leu Leu Gln Ile Ser Pro Ser Ser Gly Thr Thr Val Thr Ser Val
    50                  55                  60

Val Gly Phe Ser Cys Asp Gly Met Arg Pro Glu Ala Ile Arg Gln Asp
65                  70                  75                  80

Pro Thr Arg Lys Gly Ser Val Val Asn Val Asn Pro Thr Asn Thr Arg
                85                  90                  95

Pro Gln Ser Asp Thr Pro Glu Ile Arg Lys Tyr Lys Lys Arg Phe Asn
                100                 105                 110

Ser Glu Ile Leu Cys Ala Ala Leu Trp Gly Val Asn Leu Leu Val Gly
        115                 120                 125

Thr Glu Ser Gly Leu Met Leu Leu Asp Arg Ser Gly Gln Gly Lys Val
    130                 135                 140

Tyr Pro Leu Ile Asn Arg Arg Arg Phe Gln Gln Met Asp Val Leu Glu
145                 150                 155                 160

Gly Leu Asn Val Leu Val Thr Ile Ser Gly Lys Lys Asp Lys Leu Arg
                165                 170                 175

Val Tyr Tyr Leu Ser Trp Leu Arg Asn Lys Ile Leu His Asn Asp Pro
                180                 185                 190

Glu Val Glu Lys Lys Gln Gly Trp Thr Thr Val Gly Asp Leu Glu Gly
                195                 200                 205

Cys Val His Tyr Lys Val Val Lys Tyr Glu Arg Ile Lys Phe Leu Val
    210                 215                 220

Ile Ala Leu Lys Ser Ser Val Glu Val Tyr Ala Trp Ala Pro Lys Pro
225                 230                 235                 240

Tyr His Lys Phe Met Ala Phe Lys Ser Phe Gly Glu Leu Val His Lys
                245                 250                 255

Pro Leu Leu Val Asp Leu Thr Val Glu Glu Gly Gln Arg Leu Lys Val
                260                 265                 270

Ile Tyr Gly Ser Cys Ala Gly Phe His Ala Val Asp Val Asp Ser Gly
    275                 280                 285
```

```
Ser Val Tyr Asp Ile Tyr Leu Pro Thr His Ile Gln Cys Ser Ile Lys
    290                 295                 300

Pro His Ala Ile Ile Ile Leu Pro Asn Thr Asp Gly Met Glu Leu Leu
305                 310                 315                 320

Val Cys Tyr Glu Asp Glu Gly Val Tyr Val Asn Thr Tyr Gly Arg Ile
                325                 330                 335

Thr Lys Asp Val Val Leu Gln Trp Gly Glu Met Pro Thr Ser Val Ala
                340                 345                 350

Tyr Ile Arg Ser Asn Gln Thr Met Gly Trp Gly Glu Lys Ala Ile Glu
                355                 360                 365

Ile Arg Ser Val Glu Thr Gly His Leu Asp Gly Val Phe Met His Lys
    370                 375                 380

Arg Ala Gln Arg Leu Lys Phe Leu Cys Glu Arg Asn Asp Lys Val Phe
385                 390                 395                 400

Phe Ala Ser Val Arg Ser Gly Gly Ser Ser Gln Val Tyr Phe Met Thr
                405                 410                 415

Leu Gly Arg Thr Ser Leu Leu Ser Trp
                420                 425

<210> 134
<211> 515
<212> PRT
<213> Homo sapiens

<400> 134

Met Ala Ser Arg Thr Pro Arg Asn Cys Ala Val Leu Lys Gly Glu Val
1                 5                 10                  15

Asp Leu Thr Ala Leu Ala Lys Glu Leu Arg Ala Val Glu Asp Val Arg
                20                  25                  30

Pro Pro His Lys Val Thr Asp Tyr Ser Ser Ser Ser Glu Glu Ser Gly
            35                  40                  45

Thr Thr Asp Glu Glu Asp Asp Val Glu Gln Glu Gly Ala Asp Glu
    50                  55                  60

Ser Thr Ser Gly Pro Glu Asp Thr Arg Ala Ala Ser Ser Leu Asn Leu
65                  70                  75                  80

Ser Asn Gly Glu Thr Glu Ser Val Lys Thr Met Ile Val His Asp Asp
                85                  90                  95

Val Glu Ser Glu Pro Ala Met Thr Pro Ser Lys Glu Gly Thr Leu Ile
                100                 105                 110

Val Arg Gln Thr Gln Ser Ala Ser Ser Thr Leu Gln Lys His Lys Ser
            115                 120                 125
```

```
Ser Ser Ser Phe Thr Pro Phe Ile Asp Pro Arg Leu Leu Gln Ile Ser
    130             135             140
Pro Ser Ser Gly Thr Thr Val Thr Ser Val Val Gly Phe Ser Cys Asp
145             150             155             160
Gly Met Arg Pro Glu Ala Ile Arg Gln Asp Pro Thr Arg Lys Gly Ser
                165             170             175
Val Val Asn Val Asn Pro Thr Asn Thr Arg Pro Gln Ser Asp Thr Pro
            180             185             190
Glu Ile Arg Lys Tyr Lys Lys Arg Phe Asn Ser Glu Ile Leu Cys Ala
            195             200             205
Ala Leu Trp Gly Val Asn Leu Leu Val Gly Thr Glu Ser Gly Leu Met
    210             215             220
Leu Leu Asp Arg Ser Gly Gln Gly Lys Val Tyr Pro Leu Ile Asn Arg
225             230             235             240
Arg Arg Phe Gln Gln Met Asp Val Leu Glu Gly Leu Asn Val Leu Val
            245             250             255
Thr Ile Ser Gly Lys Lys Asp Lys Leu Arg Val Tyr Tyr Leu Ser Trp
            260             265             270
Leu Arg Asn Lys Ile Leu His Asn Asp Pro Glu Val Glu Lys Lys Gln
            275             280             285
Gly Trp Thr Thr Val Gly Asp Leu Glu Gly Cys Val His Tyr Lys Val
    290             295             300
Val Lys Tyr Glu Arg Ile Lys Phe Leu Val Ile Ala Leu Lys Ser Ser
305             310             315             320
Val Glu Val Tyr Ala Trp Ala Pro Lys Pro Tyr His Lys Phe Met Ala
            325             330             335
Phe Lys Ser Phe Gly Glu Leu Val His Lys Pro Leu Leu Val Asp Leu
            340             345             350
Thr Val Glu Glu Gly Gln Arg Leu Lys Val Ile Tyr Gly Ser Cys Ala
            355             360             365
Gly Phe His Ala Val Asp Val Asp Ser Gly Ser Val Tyr Asp Ile Tyr
    370             375             380
Leu Pro Thr His Ile Gln Cys Ser Ile Lys Pro His Ala Ile Ile Ile
385             390             395             400
Leu Pro Asn Thr Asp Gly Met Glu Leu Leu Val Cys Tyr Glu Asp Glu
            405             410             415
Gly Val Tyr Val Asn Thr Tyr Gly Arg Ile Thr Lys Asp Val Val Leu
            420             425             430
```

Gln Trp Gly Glu Met Pro Thr Ser Val Ala Tyr Ile Arg Ser Asn Gln
        435   440   445

Thr Met Gly Trp Gly Glu Lys Ala Ile Glu Ile Arg Ser Val Glu Thr
        450   455   460

Gly His Leu Asp Gly Val Phe Met His Lys Arg Ala Gln Arg Leu Lys
465   470   475   480

Phe Leu Cys Glu Arg Asn Asp Lys Val Phe Phe Ala Ser Val Arg Ser
            485   490   495

Gly Gly Ser Ser Gln Val Tyr Phe Met Thr Leu Gly Arg Thr Ser Leu
            500   505   510

Leu Ser Trp
        515

<210>   135
<211>   468
<212>   PRT
<213>   Homo sapiens

<400>   135

Met Ser Ala Arg Val Gln Leu Thr Lys Ser Val Pro Ala Ile Met Arg
1   5   10   15

Ala Met Ala Leu Arg Phe Ala Phe Thr Ser Cys Gln Ile Ser Tyr Ser
            20   25   30

Lys Ala Ile Pro Pro Pro Leu Pro Pro Pro Pro Pro His Pro Pro
            35   40   45

Ala Ser Arg His Pro Pro Cys Pro His Arg His Pro Arg Asp Lys Leu
        50   55   60

Thr Ala Asn Glu Thr Gln Ser Ala Ser Ser Thr Leu Gln Lys His Lys
65   70   75   80

Ser Ser Ser Ser Phe Thr Pro Phe Ile Asp Pro Arg Leu Leu Gln Ile
                85   90   95

Ser Pro Ser Ser Gly Thr Thr Val Thr Ser Val Val Gly Phe Ser Cys
            100   105   110

Asp Gly Met Arg Pro Glu Ala Ile Arg Gln Asp Pro Thr Arg Lys Gly
        115   120   125

Ser Val Val Asn Val Asn Pro Thr Asn Thr Arg Pro Gln Ser Asp Thr
        130   135   140

Pro Glu Ile Arg Lys Tyr Lys Lys Arg Phe Asn Ser Glu Ile Leu Cys
145   150   155   160

Ala Ala Leu Trp Gly Val Asn Leu Leu Val Gly Thr Glu Ser Gly Leu

```
                  165                        170                        175
Met Leu Leu Asp Arg Ser Gly Gln Gly Lys Val Tyr Pro Leu Ile Asn
        180                    185                    190

Arg Arg Arg Phe Gln Gln Met Asp Val Leu Glu Gly Leu Asn Val Leu
        195                    200                    205

Val Thr Ile Ser Gly Lys Lys Asp Lys Leu Arg Val Tyr Tyr Leu Ser
    210                    215                    220

Trp Leu Arg Asn Lys Ile Leu His Asn Asp Pro Glu Val Glu Lys Lys
225                    230                    235                    240

Gln Gly Trp Thr Thr Val Gly Asp Leu Glu Gly Cys Val His Tyr Lys
                245                    250                    255

Val Val Lys Tyr Glu Arg Ile Lys Phe Leu Val Ile Ala Leu Lys Ser
            260                    265                    270

Ser Val Glu Val Tyr Ala Trp Ala Pro Lys Pro Tyr His Lys Phe Met
            275                    280                    285

Ala Phe Lys Ser Phe Gly Glu Leu Val His Lys Pro Leu Leu Val Asp
    290                    295                    300

Leu Thr Val Glu Glu Gly Gln Arg Leu Lys Val Ile Tyr Gly Ser Cys
305                    310                    315                    320

Ala Gly Phe His Ala Val Asp Val Asp Ser Gly Ser Val Tyr Asp Ile
                325                    330                    335

Tyr Leu Pro Thr His Ile Gln Cys Ser Ile Lys Pro His Ala Ile Ile
            340                    345                    350

Ile Leu Pro Asn Thr Asp Gly Met Glu Leu Leu Val Cys Tyr Glu Asp
            355                    360                    365

Glu Gly Val Tyr Val Asn Thr Tyr Gly Arg Ile Thr Lys Asp Val Val
    370                    375                    380

Leu Gln Trp Gly Glu Met Pro Thr Ser Val Ala Tyr Ile Arg Ser Asn
385                    390                    395                    400

Gln Thr Met Gly Trp Gly Glu Lys Ala Ile Glu Ile Arg Ser Val Glu
                405                    410                    415

Thr Gly His Leu Asp Gly Val Phe Met His Lys Arg Ala Gln Arg Leu
            420                    425                    430

Lys Phe Leu Cys Glu Arg Asn Asp Lys Val Phe Phe Ala Ser Val Arg
            435                    440                    445

Ser Gly Gly Ser Ser Gln Val Tyr Phe Met Thr Leu Gly Arg Thr Ser
    450                    455                    460

Leu Leu Ser Trp
```

<210> 136
<211> 666
<212> PRT
<213> Homo sapiens

<220>
<221> -
<222> (1)..(666)
<223> "XAA" can be any amino acid

<400> 136

```
Met Asp Cys Gln Leu Ser Ile Leu Leu Leu Leu Ser Cys Ser Val Leu
1               5                   10                  15

Asp Ser Phe Gly Glu Leu Ile Pro Gln Pro Ser Asn Glu Val Asn Leu
            20                  25                  30

Leu Asp Ser Lys Thr Ile Gln Gly Glu Leu Gly Trp Ile Ser Tyr Pro
            35                  40                  45

Ser His Gly Trp Glu Glu Ile Ser Gly Val Asp Glu His Tyr Thr Pro
        50                  55                  60

Ile Arg Thr Tyr Gln Val Cys Asn Val Met Asp His Ser Gln Asn Asn
65                  70                  75                  80

Trp Leu Arg Thr Asn Trp Val Pro Arg Asn Ser Ala Gln Lys Ile Tyr
                85                  90                  95

Val Glu Leu Lys Phe Thr Leu Arg Asp Cys Asn Ser Ile Pro Leu Val
            100                 105                 110

Leu Gly Thr Cys Lys Glu Thr Phe Asn Leu Tyr Tyr Met Glu Ser Asp
            115                 120                 125

Asp Asp His Gly Val Lys Phe Arg Glu His Gln Phe Thr Lys Ile Asp
        130                 135                 140

Thr Ile Ala Ala Asp Glu Ser Phe Thr Gln Met Asp Leu Gly Asp Arg
145                 150                 155                 160

Ile Leu Lys Leu Asn Thr Glu Ile Arg Glu Val Gly Pro Val Asn Lys
                165                 170                 175

Lys Gly Phe Tyr Leu Ala Phe Gln Asp Val Gly Ala Cys Val Ala Leu
            180                 185                 190

Val Ser Val Arg Val Tyr Phe Lys Lys Cys Pro Phe Thr Val Lys Asn
            195                 200                 205

Leu Ala Met Phe Pro Asp Thr Val Pro Met Asp Ser Gln Ser Leu Val
        210                 215                 220
```

```
Glu Val Arg Gly Ser Cys Val Asn Asn Ser Lys Glu Glu Asp Pro Pro
225                 230                 235                 240

Arg Met Tyr Cys Ser Thr Glu Gly Glu Trp Leu Val Pro Ile Gly Lys
                245                 250                 255

Cys Ser Cys Asn Ala Gly Tyr Glu Glu Arg Gly Phe Met Cys Gln Ala
                260                 265                 270

Cys Arg Pro Gly Phe Tyr Lys Ala Leu Asp Gly Asn Met Lys Cys Ala
                275                 280                 285

Lys Cys Pro Pro His Ser Ser Thr Gln Glu Asp Gly Ser Met Asn Cys
                290                 295                 300

Arg Cys Glu Asn Asn Tyr Phe Arg Ala Asp Lys Asp Pro Pro Ser Met
305                 310                 315                 320

Ala Cys Thr Arg Pro Pro Ser Ser Pro Arg Asn Val Ile Ser Asn Ile
                325                 330                 335

Asn Glu Thr Ser Val Ile Leu Asp Trp Ser Trp Pro Leu Asp Thr Gly
                340                 345                 350

Gly Arg Lys Asp Val Thr Phe Asn Ile Ile Cys Lys Lys Cys Gly Trp
                355                 360                 365

Asn Ile Lys Gln Cys Glu Pro Cys Ser Pro Asn Val Arg Phe Leu Pro
                370                 375                 380

Arg Gln Phe Gly Leu Thr Asn Thr Thr Val Thr Val Thr Asp Leu Leu
385                 390                 395                 400

Ala His Thr Asn Tyr Thr Phe Glu Ile Asp Ala Val Asn Gly Val Ser
                405                 410                 415

Glu Leu Ser Ser Pro Pro Arg Gln Phe Ala Ala Val Ser Ile Thr Thr
                420                 425                 430

Asn Gln Ala Ala Pro Ser Pro Val Leu Thr Ile Lys Lys Asp Arg Thr
                435                 440                 445

Ser Arg Asn Ser Ile Ser Leu Ser Trp Gln Glu Pro Glu His Pro Asn
                450                 455                 460

Gly Ile Ile Leu Asp Tyr Glu Val Lys Tyr Tyr Glu Lys Gln Glu Gln
465                 470                 475                 480

Glu Thr Ser Tyr Thr Ile Leu Arg Ala Arg Gly Thr Asn Val Thr Ile
                485                 490                 495

Ser Ser Leu Lys Pro Asp Thr Ile Tyr Val Phe Gln Ile Arg Ala Arg
                500                 505                 510

Thr Ala Ala Gly Tyr Gly Thr Asn Ser Arg Lys Phe Glu Phe Glu Thr
                515                 520                 525
```

```
Ser Pro Asp Ser Phe Ser Ile Ser Gly Glu Ser Ser Gln Val Val Met
    530                 535             540

Ile Ala Ile Ser Ala Ala Val Ala Ile Ile Leu Leu Thr Val Val Ile
545             550             555                 560

Tyr Val Leu Ile Gly Arg Phe Cys Gly Tyr Lys Ser Lys His Gly Ala
                565             570             575

Asp Glu Lys Arg Leu His Phe Gly Asn Gly His Leu Lys Leu Pro Gly
            580             585             590

Leu Arg Thr Tyr Val Asp Pro His Thr Tyr Glu Asp Pro Thr Gln Ala
        595             600             605

Val His Glu Phe Ala Lys Glu Leu Asp Ala Thr Asn Ile Ser Ile Asp
    610             615             620

Lys Val Val Gly Ala Val Leu Thr Ser Glu Gln Leu His Asp Ala Glu
625             630             635             640

Xaa Phe Ser Leu Ala Gly Phe Asn Val Ser Ser Gln Gly Val His Phe
            645             650             655

Ser Pro Ala Arg Ser Leu Pro Val Ala Asn
            660             665

<210>  137
<211>  458
<212>  PRT
<213>  Homo sapiens

<400>  137

Met Lys Tyr Thr Phe Trp Gly Trp Val Ala Val Val Lys Leu Lys Asn
1               5               10              15

Ala Asp Lys Val Phe Ala Met Lys Ile Leu Asn Lys Trp Glu Met Leu
            20              25              30

Lys Arg Ala Glu Thr Ala Cys Phe Arg Glu Glu Arg Asp Val Leu Val
        35              40              45

Asn Gly Asp Asn Lys Trp Ile Thr Thr Leu His Tyr Ala Phe Gln Asp
    50              55              60

Asp Asn Asn Leu Tyr Leu Val Met Asp Tyr Tyr Val Gly Gly Asp Leu
65              70              75              80

Leu Thr Leu Leu Ser Lys Phe Glu Asp Arg Leu Pro Glu Asp Met Ala
            85              90              95

Arg Phe Tyr Leu Ala Glu Met Val Ile Ala Ile Asp Ser Val His Gln
        100             105             110

Leu His Tyr Val His Arg Asp Ile Lys Pro Asp Asn Ile Leu Met Asp
        115             120             125
```

```
Met Asn Gly His Ile Arg Leu Ala Asp Phe Gly Ser Cys Leu Lys Leu
    130                 135                 140

Met Glu Asp Gly Thr Val Gln Ser Ser Val Ala Val Gly Thr Pro Asp
145                 150                 155                 160

Tyr Ile Ser Pro Glu Ile Leu Gln Ala Met Glu Asp Gly Lys Gly Arg
                165                 170                 175

Tyr Gly Pro Glu Cys Asp Trp Trp Ser Leu Gly Val Cys Met Tyr Glu
                180                 185                 190

Met Leu Tyr Gly Glu Thr Pro Phe Tyr Ala Glu Ser Leu Val Glu Thr
            195                 200                 205

Tyr Gly Lys Ile Met Asn His Lys Glu Arg Phe Gln Phe Pro Ala Gln
    210                 215                 220

Val Thr Asp Val Ser Glu Asn Ala Lys Asp Leu Ile Arg Arg Leu Ile
225                 230                 235                 240

Cys Ser Arg Glu His Arg Leu Gly Gln Asn Gly Ile Glu Asp Phe Lys
            245                 250                 255

Lys His Pro Phe Phe Ser Gly Ile Asp Trp Asp Asn Ile Arg Asn Cys
            260                 265                 270

Glu Ala Pro Tyr Ile Pro Glu Val Ser Ser Pro Thr Asp Thr Ser Asn
    275                 280                 285

Phe Asp Val Asp Asp Asp Cys Leu Lys Asn Ser Glu Thr Met Pro Pro
    290                 295                 300

Pro Thr His Thr Ala Phe Ser Gly His His Leu Pro Phe Val Gly Phe
305                 310                 315                 320

Thr Tyr Thr Ser Ser Cys Val Leu Ser Asp Arg Ser Cys Leu Arg Val
            325                 330                 335

Thr Ala Gly Pro Thr Ser Leu Asp Leu Asp Val Asn Val Gln Arg Thr
            340                 345                 350

Leu Asp Asn Asn Leu Ala Thr Glu Ala Tyr Glu Arg Arg Ile Lys Arg
    355                 360                 365

Leu Glu Gln Glu Lys Leu Glu Leu Ser Arg Lys Leu Gln Glu Ser Thr
    370                 375                 380

Gln Thr Val Gln Ala Leu Gln Tyr Ser Thr Val Asp Gly Pro Leu Thr
385                 390                 395                 400

Ala Ser Lys Asp Leu Glu Ile Lys Asn Leu Lys Glu Glu Ile Glu Lys
            405                 410                 415

Leu Arg Lys Gln Val Thr Glu Ser Ser His Leu Glu Gln Gln Leu Glu
            420                 425                 430
```

Glu Ala Asn Ala Val Arg Gln Glu Leu Asp Asp Ala Phe Arg Gln Ile
        435   440   445

Lys Ala Tyr Glu Lys Gln Ile Lys Thr Leu
    450   455

<210>   138
<211>   262
<212>   PRT
<213>   Homo sapiens

<400>   138

Met Glu Val Val Asp Pro Gln Gln Leu Gly Met Phe Thr Glu Gly Glu
1   5   10   15

Leu Met Ser Val Gly Met Asp Thr Phe Ile His Arg Ile Asp Ser Thr
            20   25   30

Glu Val Ile Tyr Gln Pro Arg Arg Lys Arg Ala Lys Leu Ile Gly Lys
        35   40   45

Tyr Leu Met Gly Asp Leu Leu Gly Glu Gly Ser Tyr Gly Lys Val Lys
    50   55   60

Glu Val Leu Asp Ser Glu Thr Leu Cys Arg Arg Ala Val Lys Ile Leu
65   70   75   80

Lys Lys Lys Lys Leu Arg Arg Ile Pro Asn Gly Glu Ala Asn Val Lys
            85   90   95

Lys Glu Ile Gln Leu Leu Arg Arg Leu Arg His Lys Asn Val Ile Gln
            100   105   110

Leu Val Asp Val Leu Tyr Asn Glu Glu Lys Gln Lys Met Tyr Met Val
        115   120   125

Met Glu Tyr Cys Val Cys Gly Met Gln Glu Met Leu Asp Ser Val Pro
    130   135   140

Glu Lys Arg Phe Pro Val Cys Gln Ala His Gly Ser Pro Ser Arg Arg
145   150   155   160

Gly Gly Arg His Ala Ser Val Pro Thr Thr Pro Gln Asp Leu Arg Ser
            165   170   175

Ala Leu Gln Gly Arg Ala Gly Gly Gln Gln Gly Pro Gly Ala Ala Leu
            180   185   190

Pro Pro Arg Pro Pro Gly Ser Ala Arg Gly Leu Leu Thr Ser Gln Pro
        195   200   205

Arg Ala Glu Pro Ser Arg Ala Gly Val Gly Gly Gly Arg Arg Pro Pro
    210   215   220

Cys Thr Leu Cys Gly Asp Tyr Trp Pro Arg Pro Trp Pro Arg Ala Pro

Gln Gly Ala Gln Arg Arg Pro Ala Ala Pro Pro Gln Thr Ser Trp Arg
                245   250   255

Val Trp Arg Pro Gly Ser
                260

<210> 139
<211> 203
<212> PRT
<213> Homo sapiens

<400> 139

Met Glu Val Val Asp Pro Gln Gln Leu Gly Met Phe Thr Glu Gly Glu
1   5   10   15

Leu Met Ser Val Gly Met Asp Thr Phe Ile His Arg Ile Asp Ser Thr
            20   25   30

Glu Val Ile Tyr Gln Pro Arg Arg Lys Arg Ala Lys Leu Ile Gly Lys
        35   40   45

Tyr Leu Met Gly Asp Leu Leu Gly Glu Gly Ser Tyr Gly Lys Val Lys
    50   55   60

Glu Val Leu Asp Ser Glu Thr Leu Cys Arg Arg Ala Val Lys Ile Leu
65   70   75   80

Lys Lys Lys Lys Leu Arg Arg Ile Pro Asn Gly Glu Ala Asn Val Lys
            85   90   95

Lys Glu Ile Gln Leu Leu Arg Arg Leu Arg His Lys Asn Val Ile Gln
            100   105   110

Leu Val Asp Val Leu Tyr Asn Glu Glu Lys Gln Lys Met Tyr Met Val
        115   120   125

Met Glu Tyr Cys Val Cys Gly Met Gln Glu Met Leu Asp Ser Val Pro
    130   135   140

Glu Lys Arg Phe Pro Val Cys Gln Ala His Gly Tyr Phe Cys Gln Leu
145   150   155   160

Ile Asp Gly Leu Glu Tyr Leu His Ser Gln Gly Ile Val His Lys Asp
            165   170   175

Ile Lys Pro Gly Asn Leu Leu Leu Thr Thr Gly Gly Thr Leu Lys Ile
            180   185   190

Ser Asp Leu Gly Val Ala Glu Val Gly Thr Cys
        195   200

<210> 140
<211> 244
<212> PRT

<213> Homo sapiens

<400> 140

```
Met Asp Arg Glu Thr Thr Pro Leu Gly Leu Leu Trp Leu Ile Gln Val
1               5                   10                  15

Ile Pro Ser Lys Leu Leu Pro Ser Leu Gln Val Lys Asp Phe Leu Ser
                20              25                  30

Gln Leu Arg Ser Ser Asn Arg Arg Phe Ser Ile Pro Glu Ser Gly Gln
        35                  40                  45

Gly Gly Thr Glu Met Asp Gly Phe Arg Arg Thr Ile Glu Asn Gln His
    50                  55                  60

Ser Arg Asn Asp Val Met Val Ser Glu Trp Leu Asn Lys Leu Asn Leu
65                  70                  75                  80

Glu Glu Pro Pro Ser Ser Val Pro Lys Lys Cys Pro Ser Leu Thr Lys
                85                  90                  95

Arg Ser Arg Ala Gln Glu Glu Gln Val Pro Gln Ala Trp Thr Ala Gly
        100                 105                 110

Thr Ser Ser Asp Ser Met Ala Gln Pro Pro Gln Thr Pro Glu Thr Ser
        115                 120                 125

Thr Phe Arg Asn Gln Met Pro Ser Pro Thr Ser Thr Gly Thr Pro Ser
        130                 135                 140

Pro Gly Pro Arg Gly Asn Gln Gly Ala Glu Arg Gln Gly Met Asn Trp
145                 150                 155                 160

Ser Cys Arg Thr Pro Glu Pro Asn Pro Val Thr Gly Arg Pro Leu Val
                165                 170                 175

Asn Ile Tyr Asn Cys Ser Gly Val Gln Val Gly Asp Asn Asn Tyr Leu
            180                 185                 190

Thr Met Gln Gln Thr Thr Ala Leu Pro Thr Trp Gly Leu Ala Pro Ser
        195                 200                 205

Gly Lys Gly Arg Gly Leu Gln His Pro Pro Pro Val Gly Ser Gln Glu
    210                 215                 220

Gly Pro Lys Asp Pro Glu Ala Trp Ser Arg Pro Gln Gly Trp Tyr Asn
225                 230                 235                 240

His Ser Gly Lys
```

<210> 141
<211> 222
<212> PRT
<213> Homo sapiens

<400> 141

```
Met Val Lys Leu Tyr Leu Tyr Gln Lys Asn Val Lys Ile Ala Ile Phe
1               5                   10              15

Asp Leu Lys Ser Arg Gln Asn Phe Phe Val Tyr Phe Arg Glu Glu Gln
            20                  25                  30

Ala Arg Glu Leu Tyr Arg Arg Leu Arg Glu Lys Pro Arg Asp Gln Arg
        35                  40                  45

Thr Glu Gly Asp Ser Gln Glu Met Val Arg Leu Leu Leu Gln Ala Ile
    50                  55                  60

Gln Ser Phe Glu Lys Lys Val Arg Val Ile Tyr Thr Gln Leu Ser Lys
65                  70                  75                  80

Thr Val Val Cys Lys Gln Lys Ala Leu Glu Leu Leu Pro Lys Val Glu
            85                  90                  95

Glu Val Val Ser Leu Met Asn Glu Asp Glu Lys Thr Val Val Arg Leu
            100                 105                 110

Gln Glu Lys Arg Gln Lys Glu Leu Trp Asn Leu Leu Lys Ile Ala Cys
        115                 120                 125

Ser Lys Val Arg Gly Pro Val Ser Gly Ser Pro Asp Ser Met Asn Ala
    130                 135                 140

Ser Arg Leu Ser Gln Pro Gly Gln Leu Met Ser Gln Pro Ser Thr Ala
145                 150                 155                 160

Ser Asn Ser Leu Pro Glu Pro Ala Lys Lys Ser Glu Glu Leu Val Ala
            165                 170                 175

Glu Ala His Asn Leu Cys Thr Leu Leu Glu Asn Ala Ile Gln Asp Thr
            180                 185                 190

Val Arg Glu Gln Asp Gln Ser Phe Thr Ala Leu Asp Trp Ser Trp Leu
        195                 200                 205

Gln Thr Glu Glu Glu Glu His Ser Cys Leu Glu Gln Ala Ser
    210                 215                 220
```

<210> 142
<211> 409
<212> PRT
<213> Homo sapiens

<400> 142

```
Met Arg Leu Thr Leu Leu Cys Cys Thr Trp Arg Glu Glu Arg Met Gly
1               5                   10              15

Glu Glu Gly Ser Glu Leu Pro Val Cys Ala Ser Cys Gly Gln Arg Ile
            20                  25                  30
```

Tyr Asp Gly Gln Tyr Leu Gln Ala Leu Asn Ala Asp Trp His Ala Asp
        35   40   45

Cys Phe Arg Cys Cys Asp Cys Ser Ala Ser Leu Ser His Gln Tyr Tyr
    50   55   60

Glu Lys Asp Gly Gln Leu Phe Cys Lys Lys Asp Tyr Trp Ala Arg Tyr
65   70   75   80

Gly Glu Ser Cys His Gly Cys Ser Glu Gln Ile Thr Lys Gly Leu Val
            85   90   95

Met Val Ala Gly Glu Leu Lys Tyr His Pro Glu Cys Phe Ile Cys Leu
            100   105   110

Thr Cys Gly Thr Phe Ile Gly Asp Gly Asp Thr Tyr Thr Leu Val Glu
        115   120   125

His Ser Lys Leu Tyr Cys Gly His Cys Tyr Tyr Gln Thr Val Val Thr
    130   135   140

Pro Val Ile Glu Gln Ile Leu Pro Asp Ser Pro Gly Ser His Leu Pro
145   150   155   160

His Thr Val Thr Leu Val Ser Ile Pro Ala Ser Ser His Gly Lys Arg
        165   170   175

Gly Leu Ser Val Ser Ile Asp Pro Pro His Gly Pro Pro Gly Cys Gly
        180   185   190

Thr Glu His Ser His Thr Val Arg Val Gln Gly Val Asp Pro Gly Cys
    195   200   205

Met Ser Pro Asp Val Lys Asn Ser Ile His Val Gly Asp Arg Ile Leu
    210   215   220

Glu Ile Asn Gly Thr Pro Ile Arg Asn Val Pro Leu Asp Glu Ile Asp
225   230   235   240

Leu Leu Ile Gln Glu Thr Ser Arg Leu Leu Gln Leu Thr Leu Glu His
            245   250   255

Asp Pro His Asp Thr Leu Gly His Gly Leu Gly Pro Glu Thr Ser Pro
        260   265   270

Leu Ser Ser Pro Ala Tyr Thr Pro Ser Gly Glu Ala Gly Ser Ser Ala
    275   280   285

Arg Gln Lys Pro Val Leu Arg Ser Cys Ser Ile Asp Arg Ser Pro Gly
    290   295   300

Ala Gly Ser Leu Gly Ser Pro Ala Ser Gln Arg Lys Asp Leu Gly Arg
305   310   315   320

Ser Glu Ser Leu Arg Val Val Cys Arg Pro His Arg Ile Phe Arg Pro
            325   330   335

```
Ser Asp Leu Ile His Gly Glu Val Leu Gly Lys Gly Cys Phe Gly Gln
        340             345             350

Ala Ile Lys Val Gln Ser Met Pro Gly Ser Gln Leu Asp Ser Leu Gly
        355             360             365

Gly Thr Pro Pro Ser Ser Phe Leu Pro Ser Leu Trp Lys His Ser Gly
    370             375             380

Arg Gly Ile Trp Leu Ser Asp Ser Leu Ala Ser Ala Leu Ser Ser Leu
385             390             395             400

Gly Leu Leu Glu Leu Ile Arg Asn Arg
                405


<210>   143
<211>   305
<212>   PRT
<213>   Homo sapiens


<400>   143

Met Arg Leu Thr Leu Leu Cys Cys Thr Trp Arg Glu Glu Arg Met Gly
1               5               10              15

Glu Glu Gly Ser Glu Leu Pro Val Cys Ala Ser Cys Gly Gln Arg Ile
            20              25              30

Tyr Asp Gly Gln Tyr Leu Gln Ala Leu Asn Ala Asp Trp His Ala Asp
        35              40              45

Cys Phe Arg Cys Cys Asp Cys Ser Ala Ser Leu Ser His Gln Tyr Tyr
    50              55              60

Glu Lys Asp Gly Gln Leu Phe Cys Lys Lys Asp Tyr Trp Ala Arg Tyr
65              70              75              80

Gly Glu Ser Cys His Gly Cys Ser Glu Gln Ile Thr Lys Gly Leu Val
            85              90              95

Met Val Ala Gly Glu Leu Lys Tyr His Pro Glu Cys Phe Ile Cys Leu
        100             105             110

Thr Cys Gly Thr Phe Ile Gly Asp Gly Asp Thr Tyr Thr Leu Val Glu
        115             120             125

His Ser Lys Leu Tyr Cys Gly His Cys Tyr Tyr Gln Thr Val Val Thr
    130             135             140

Pro Val Ile Glu Gln Ile Leu Pro Asp Ser Pro Gly Ser His Leu Pro
145             150             155             160

His Thr Val Thr Leu Val Ser Ile Pro Ala Ser Ser His Gly Lys Arg
            165             170             175

Gly Leu Ser Val Ser Ile Asp Pro Pro His Gly Pro Pro Gly Cys Gly
            180             185             190
```

```
Thr Glu His Ser His Thr Val Arg Val Gln Gly Val Asp Pro Gly Cys
        195                 200                 205

Met Ser Pro Asp Val Lys Asn Ser Ile His Val Gly Asp Arg Ile Leu
        210                 215                 220

Glu Ile Asn Gly Thr Pro Ile Arg Asn Val Pro Leu Asp Glu Ile Asp
225                     230                 235                 240

Leu Leu Ile Gln Glu Thr Ser Arg Leu Leu Gln Leu Thr Leu Glu His
                245                 250                 255

Asp Pro His Asp Thr Leu Gly His Gly Leu Gly Pro Glu Thr Ser Pro
            260                 265                 270

Leu Ser Ser Pro Ala Tyr Thr Pro Ser Gly Glu Ala Gly Ser Ser Ala
        275                 280                 285

Arg Gln Lys Pro Val Phe Ala Arg Thr Trp Val Ala Leu Ser Pro Ser
    290                 295                 300

Ala
305

<210>   144
<211>   780
<212>   PRT
<213>   Homo sapiens

<400>   144

Met Ala Ser Asp Ala Val Gln Ser Glu Pro Arg Ser Trp Ser Leu Leu
1               5                   10                  15

Glu Gln Leu Gly Leu Ala Gly Ala Asp Leu Ala Ala Pro Gly Val Gln
            20                  25                  30

Gln Gln Leu Glu Leu Glu Arg Glu Arg Leu Arg Arg Glu Ile Arg Lys
        35                  40                  45

Glu Leu Lys Leu Lys Glu Gly Ala Glu Asn Leu Arg Arg Ala Thr Thr
    50                  55                  60

Asp Leu Gly Arg Ser Leu Gly Pro Val Glu Leu Leu Leu Arg Gly Ser
65              70                  75                  80

Ser Arg Arg Leu Asp Leu Leu His Gln Gln Leu Gln Glu Leu His Ala
                85                  90                  95

His Val Val Leu Pro Asp Pro Ala Ala Thr His Asp Gly Pro Gln Ser
            100                 105                 110

Pro Gly Ala Gly Gly Pro Thr Cys Ser Ala Thr Asn Leu Ser Arg Val
        115                 120                 125

Ala Gly Leu Glu Lys Gln Leu Ala Ile Glu Leu Lys Val Lys Gln Gly
```

```
            130                     135                     140

Ala Glu Asn Met Ile Gln Thr Tyr Ser Asn Gly Ser Thr Lys Asp Arg
145                 150                 155                 160

Lys Leu Leu Leu Thr Ala Gln Gln Met Leu Gln Asp Ser Lys Thr Lys
                165                 170                 175

Ile Asp Ile Ile Arg Met Gln Leu Arg Arg Ala Leu Gln Ala Asp Gln
                180                 185                 190

Leu Glu Asn Gln Ala Ala Pro Asp Asp Thr Gln Gly Ser Pro Asp Leu
            195                 200                 205

Gly Ala Val Glu Leu Arg Ile Glu Glu Leu Arg His His Phe Arg Val
    210                 215                 220

Glu His Ala Val Ala Glu Gly Ala Lys Asn Val Leu Arg Leu Leu Ser
225                 230                 235                 240

Ala Ala Lys Ala Pro Asp Arg Lys Ala Val Ser Glu Ala Gln Glu Lys
                245                 250                 255

Leu Thr Glu Ser Asn Gln Lys Leu Gly Leu Leu Arg Glu Ala Leu Glu
                260                 265                 270

Arg Arg Leu Gly Glu Leu Pro Ala Asp His Pro Lys Gly Arg Leu Leu
                275                 280                 285

Arg Glu Glu Leu Ala Ala Ala Ser Ser Ala Ala Phe Ser Thr Arg Leu
                290                 295                 300

Ala Gly Pro Phe Pro Ala Thr His Tyr Ser Thr Leu Cys Lys Pro Ala
305                 310                 315                 320

Pro Leu Thr Gly Thr Leu Glu Val Arg Val Val Gly Cys Arg Asp Leu
                325                 330                 335

Pro Glu Thr Ile Pro Trp Asn Pro Thr Pro Ser Met Gly Gly Pro Gly
                340                 345                 350

Thr Pro Asp Ser Arg Pro Pro Phe Leu Ser Arg Pro Ala Arg Gly Leu
                355                 360                 365

Tyr Ser Arg Ser Gly Ser Leu Ser Gly Arg Ser Ser Leu Lys Ala Glu
    370                 375                 380

Ala Glu Asn Thr Ser Glu Val Ser Thr Val Leu Lys Leu Asp Asn Thr
385                 390                 395                 400

Val Val Gly Gln Thr Ser Trp Lys Pro Cys Gly Pro Asn Ala Trp Asp
                405                 410                 415

Gln Ser Phe Thr Leu Glu Leu Glu Arg Ala Arg Glu Leu Glu Leu Ala
                420                 425                 430

Val Phe Trp Arg Asp Gln Arg Gly Leu Cys Ala Leu Lys Phe Leu Lys
```

Leu Glu Asp Phe Leu Asp Asn Glu Arg His Glu Val Gln Leu Asp Met
    450   455   460

Glu Pro Gln Gly Cys Leu Val Ala Glu Val Thr Phe Arg Asn Pro Val
465   470   475   480

Ile Glu Arg Ile Pro Arg Leu Arg Arg Gln Lys Lys Ile Phe Ser Lys
            485   490   495

Gln Gln Gly Lys Ala Phe Gln Arg Ala Arg Gln Met Asn Ile Asp Val
            500   505   510

Ala Thr Trp Val Arg Leu Leu Arg Arg Leu Ile Pro Asn Ala Thr Gly
        515   520   525

Thr Gly Thr Phe Ser Pro Gly Ala Ser Pro Gly Ser Glu Ala Arg Thr
    530   535   540

Thr Gly Asp Ile Ser Val Glu Lys Leu Asn Leu Gly Thr Asp Ser Asp
545   550   555   560

Ser Ser Pro Gln Lys Ser Ser Arg Asp Pro Pro Ser Ser Pro Ser Ser
            565   570   575

Leu Ser Ser Pro Ile Gln Glu Ser Thr Ala Pro Glu Leu Pro Ser Glu
            580   585   590

Thr Gln Glu Thr Pro Gly Pro Ala Leu Cys Ser Pro Leu Arg Lys Ser
        595   600   605

Pro Leu Thr Leu Glu Asp Phe Lys Phe Leu Ala Val Leu Gly Arg Gly
    610   615   620

His Phe Gly Lys Val Leu Leu Ser Glu Phe Arg Pro Ser Gly Glu Leu
625   630   635   640

Phe Ala Ile Lys Ala Leu Lys Lys Gly Asp Ile Val Ala Arg Asp Glu
            645   650   655

Val Glu Ser Leu Met Cys Glu Lys Arg Ile Leu Ala Ala Val Thr Ser
            660   665   670

Ala Gly His Pro Phe Leu Val Asn Leu Phe Gly Cys Phe Gln Thr Pro
        675   680   685

Glu His Val Cys Phe Val Met Glu Tyr Ser Ala Gly Gly Asp Leu Met
    690   695   700

Leu His Ile His Ser Asp Val Phe Ser Glu Pro Arg Ala Ile Phe Tyr
705   710   715   720

Ser Ala Cys Arg Leu Pro Pro Pro Phe Val Pro Thr Leu Ser Gly Arg
            725   730   735

Thr Asp Val Ser Asn Phe Asp Glu Glu Phe Thr Gly Glu Ala Pro Thr

Leu Ser Pro Pro Arg Asp Ala Arg Pro Leu Thr Ala Ala Glu Gln Ala
    755   760   765

Ala Phe Leu Asp Phe Asp Phe Val Ala Gly Gly Cys
    770   775   780

<210> 145
<211> 401
<212> PRT
<213> Homo sapiens

<400> 145

Met Ala Ser Asp Ala Val Gln Ser Glu Pro Arg Ser Trp Ser Leu Leu
1   5   10   15

Glu Gln Leu Gly Leu Ala Gly Ala Asp Leu Ala Ala Pro Gly Val Gln
        20   25   30

Gln Gln Leu Glu Leu Glu Arg Glu Arg Leu Arg Arg Glu Ile Arg Lys
        35   40   45

Glu Leu Lys Leu Lys Glu Gly Ala Glu Asn Leu Arg Arg Ala Thr Thr
    50   55   60

Asp Leu Gly Arg Ser Leu Gly Pro Val Glu Leu Leu Leu Arg Gly Ser
65   70   75   80

Ser Arg Arg Leu Asp Leu Leu His Gln Gln Leu Gln Glu Leu His Ala
        85   90   95

His Val Val Leu Pro Asp Pro Ala Ala Thr His Asp Gly Pro Gln Ser
        100   105   110

Pro Gly Ala Gly Gly Pro Thr Cys Ser Ala Thr Asn Leu Ser Arg Val
        115   120   125

Ala Gly Leu Glu Lys Gln Leu Ala Ile Glu Leu Lys Val Lys Gln Gly
    130   135   140

Ala Glu Asn Met Ile Gln Thr Tyr Ser Asn Gly Ser Thr Lys Asp Arg
145   150   155   160

Lys Leu Leu Leu Thr Ala Gln Gln Met Leu Gln Asp Ser Lys Thr Lys
            165   170   175

Ile Asp Ile Ile Arg Met Gln Leu Arg Arg Ala Leu Gln Ala Asp Gln
            180   185   190

Leu Glu Asn Gln Ala Ala Pro Asp Asp Thr Gln Gly Ser Pro Asp Leu
        195   200   205

Gly Ala Val Glu Leu Arg Ile Glu Glu Leu Arg His His Phe Arg Val
    210   215   220

```
Glu His Ala Val Ala Glu Gly Ala Lys Asn Val Leu Arg Leu Leu Ser
225                 230                 235                 240

Ala Ala Lys Ala Pro Asp Arg Lys Ala Val Ser Glu Ala Gln Glu Lys
                245                 250                 255

Leu Thr Glu Ser Asn Gln Lys Leu Gly Leu Leu Arg Glu Ala Leu Glu
                260                 265                 270

Arg Arg Leu Gly Glu Leu Pro Ala Asp His Pro Lys Gly Arg Leu Leu
                275                 280                 285

Arg Glu Glu Leu Ala Ala Ala Ser Ser Ala Ala Phe Ser Thr Arg Leu
    290                 295                 300

Ala Gly Pro Phe Pro Ala Thr His Tyr Ser Thr Leu Cys Lys Pro Ala
305                 310                 315                 320

Pro Leu Thr Gly Thr Leu Glu Val Arg Val Val Gly Cys Arg Asp Leu
                325                 330                 335

Pro Glu Thr Ile Pro Trp Asn Pro Thr Pro Ser Met Gly Gly Pro Gly
                340                 345                 350

Thr Pro Asp Ser Arg Pro Pro Phe Leu Ser Arg Pro Ala Arg Gly Leu
                355                 360                 365

Tyr Ser Arg Ser Gly Ser Leu Ser Gly Arg Ser Ser Leu Lys Ala Glu
    370                 375                 380

Ala Glu Asn Thr Ser Glu Val Ser Thr Val Leu Lys Leu Asp Asn Thr
385                 390                 395                 400

His
```

<210> 146
<211> 96
<212> PRT
<213> Homo sapiens

<400> 146

```
Met Gln Ser Phe Leu Val Glu Gly Arg Phe Lys His Glu Met Phe Glu
1               5               10                  15

Lys Val Phe Ala Glu Glu Arg Asn Gly Gly Gln Arg Leu Leu Cys Ala
                20              25                  30

Thr Asp Val Pro Ile Arg Thr Val Ser Ser Ala Ala Ser Gln Gly Leu
                35              40                  45

His Met Gln Asn Asp Asp Ala Cys Leu Gly Ala Ala Ser Pro Ser Ala
    50              55                  60

Ala Ser Trp Ser Arg Arg Ser Ala Glu Ser Lys Val Ser Leu Cys Trp
65              70              75                  80
```

Lys Leu Lys Trp Lys Glu Asp Leu Val Trp Phe Tyr Ser Gln Ser His
                    85   90   95

<210> 147
<211> 333
<212> PRT
<213> Homo sapiens

<400> 147

Met His Arg Tyr Phe Glu Ser Pro Arg Arg Leu Leu Pro Val His Phe
1   5   10   15

Cys Cys Cys Gln Trp Arg Gly Gly Gly Val Asp Phe Glu Cys Leu Leu
            20   25   30

Gly Gly Val Trp Asp Arg Cys Arg Lys Val Leu Arg Ala Gln Glu Cys
        35   40   45

Glu Trp Pro Arg His Leu Pro Ser Ala Cys Leu Leu Ser Ser Ala Cys
    50   55   60

Arg Gly Gln Pro Glu Arg Arg Ala Ala Val Val Gly Ala Gln Asp Pro
65   70   75   80

Thr Glu Pro Pro Arg Leu Ser Arg Ser Leu Ser Gly Ala Ser Pro Phe
                85   90   95

Leu Gly Glu Thr Lys Gln Glu Thr Leu Thr Asn Ile Ser Ala Val Asn
            100   105   110

Tyr Asp Phe Asp Glu Glu Tyr Phe Ser Asn Thr Ser Glu Leu Ala Lys
        115   120   125

Asp Phe Ile Arg Arg Leu Leu Val Lys Asp Pro Lys Arg Arg Met Thr
        130   135   140

Ile Ala Gln Ser Leu Glu His Ser Trp Ile Lys Ala Ile Arg Arg Arg
145   150   155   160

Asn Val Arg Gly Glu Asp Ser Gly Arg Lys Pro Glu Arg Arg Arg Leu
            165   170   175

Lys Thr Thr Arg Leu Lys Glu Tyr Thr Ile Lys Ser His Ser Ser Leu
            180   185   190

Pro Pro Asn Asn Ser Tyr Ala Asp Phe Glu Arg Phe Ser Lys Val Leu
            195   200   205

Glu Glu Ala Ala Ala Ala Glu Glu Gly Leu Arg Glu Leu Gln Arg Ser
        210   215   220

Arg Arg Leu Cys His Glu Asp Val Glu Ala Leu Ala Ala Ile Tyr Glu
225   230   235   240

Glu Lys Glu Ala Trp Tyr Arg Glu Glu Ser Asp Ser Leu Gly Gln Asp

Leu Arg Arg Leu Arg Gln Glu Leu Leu Lys Thr Glu Ala Leu Lys Arg
        260   265   270

Gln Ala Gln Glu Glu Ala Lys Gly Ala Leu Leu Gly Thr Ser Gly Leu
        275   280   285

Lys Arg Arg Phe Ser Arg Leu Glu Asn Arg Tyr Glu Ala Leu Ala Lys
        290   295   300

Gln Val Ala Ser Glu Met Arg Phe Val Gln Asp Leu Val Arg Ala Leu
305   310   315   320

Glu Gln Glu Lys Leu Gln Gly Val Glu Cys Gly Leu Arg
                325   330

<210> 148
<211> 131
<212> PRT
<213> Homo sapiens

<400> 148

Met Leu Lys Glu Phe Leu Glu Ile Pro Phe Pro Thr Ser Pro Glu Cys
1   5   10   15

Thr Leu Gln Pro Lys Ser Gln Gln Pro Thr Gly Lys Glu Ala Glu Glu
        20   25   30

His Pro Thr Ser Ala Pro Leu Thr His Ser Leu Leu Pro Pro Thr Pro
        35   40   45

Leu Trp Val Val Ser His Phe Ile Phe Asp Phe Arg Gly Glu Thr Ala
    50   55   60

Leu His Lys Ala Ala Cys Gln Arg Asn Arg Ala Val Cys Gln Leu Leu
65   70   75   80

Val Asp Ala Gly Ala Ser Leu Arg Lys Thr Asp Ser Lys Gly Lys Thr
        85   90   95

Pro Gln Glu Arg Ala Gln Gln Ala Gly Asp Pro Asp Leu Ala Ala Tyr
        100   105   110

Leu Glu Ser Arg Gln Asn Tyr Lys Val Ile Gly His Glu Asp Leu Glu
        115   120   125

Thr Ala Val
    130

<210> 149
<211> 272
<212> PRT
<213> Homo sapiens

<400> 149

Met Arg Gly Ala Ala Arg Leu Gly Arg Pro Gly Arg Ser Cys Leu Pro
1   5   10   15

Gly Pro Ala Leu Arg Ala Pro Pro Arg Pro Pro Leu Leu Leu Leu Leu
            20   25   30

Ala Leu Leu Pro Leu Leu Pro Ala Pro Gly Ala Ala Ala Ala Pro Ala
        35   40   45

Pro Arg Pro Pro Glu Leu Gln Ser Ala Ser Ala Gly Pro Ser Val Ser
    50   55   60

Leu Tyr Leu Ser Glu Asp Glu Val Arg Arg Leu Ile Gly Leu Asp Ala
65   70   75   80

Glu Leu Tyr Tyr Val Arg Asn Asp Leu Ile Ser His Tyr Ala Leu Ser
            85   90   95

Phe Ser Leu Leu Val Pro Ser Glu Thr Asn Phe Leu His Phe Thr Trp
            100   105   110

His Ala Lys Ser Lys Val Glu Tyr Lys Leu Gly Phe Gln Val Asp Asn
        115   120   125

Val Leu Ala Met Asp Met Pro Gln Val Asn Ile Ser Val Gln Gly Glu
    130   135   140

Val Pro Arg Thr Leu Ser Val Phe Arg Val Glu Leu Ser Cys Thr Gly
145   150   155   160

Lys Val Asp Ser Glu Val Met Ile Leu Met Gln Leu Asn Leu Thr Val
            165   170   175

Asn Ser Ser Lys Asn Phe Thr Val Leu Asn Phe Lys Arg Arg Lys Met
            180   185   190

Cys Tyr Lys Lys Leu Glu Glu Val Lys Thr Ser Ala Leu Asp Lys Asn
        195   200   205

Thr Ser Arg Thr Ile Tyr Asp Pro Val His Ala Ala Pro Thr Thr Ser
    210   215   220

Thr Arg Val Phe Tyr Ile Ser Val Gly Val Cys Cys Ala Val Ile Phe
225   230   235   240

Leu Val Ala Ile Ile Leu Ala Val Leu His Leu His Ser Met Lys Arg
            245   250   255

Ile Glu Leu Asp Asp Arg Tyr Cys Thr Tyr Phe Gly Lys Glu Lys Lys
            260   265   270

<210> 150
<211> 344
<212> PRT
<213> Homo sapiens

<400> 150

Met Pro Gln Val Asn Ile Ser Val Gln Gly Glu Val Pro Arg Thr Leu
1   5   10   15

Ser Val Phe Arg Val Glu Leu Ser Cys Thr Gly Lys Val Asp Ser Glu
            20   25   30

Val Met Ile Leu Met Gln Leu Asn Leu Thr Val Asn Ser Ser Lys Asn
            35   40   45

Phe Thr Val Leu Asn Phe Lys Arg Arg Lys Met Cys Tyr Lys Lys Leu
        50   55   60

Glu Glu Val Lys Thr Ser Ala Leu Asp Lys Asn Thr Ser Arg Thr Ile
65   70   75   80

Tyr Asp Pro Val His Ala Ala Pro Thr Thr Ser Thr Arg Val Phe Tyr
            85   90   95

Ile Ser Val Gly Val Cys Cys Ala Val Ile Phe Leu Val Ala Ile Ile
            100   105   110

Leu Ala Val Leu His Leu His Ser Met Lys Arg Ile Glu Leu Asp Asp
            115   120   125

Ser Ile Ser Ala Ser Ser Ser Ser Gln Gly Leu Ser Gln Pro Ser Thr
        130   135   140

Gln Thr Thr Gln Tyr Leu Arg Ala Asp Thr Pro Asn Asn Ala Thr Pro
145   150   155   160

Ile Thr Ser Ser Tyr Tyr Pro Thr Leu Arg Ile Glu Lys Asn Asp Leu
            165   170   175

Arg Ser Val Thr Leu Leu Glu Ala Lys Gly Lys Val Lys Asp Ile Ala
            180   185   190

Ile Ser Arg Glu Arg Ile Thr Leu Lys Asp Val Leu Gln Glu Gly Thr
        195   200   205

Phe Gly Arg Ile Phe His Gly Ile Leu Ile Asp Glu Lys Asp Pro Asn
        210   215   220

Lys Glu Lys Gln Ala Phe Val Lys Thr Val Lys Asp Gln Ala Ser Glu
225   230   235   240

Ile Gln Val Thr Met Met Leu Thr Glu Ser Cys Lys Leu Arg Gly Leu
            245   250   255

His His Arg Asn Leu Leu Pro Ile Thr His Val Cys Ile Glu Glu Gly
            260   265   270

Glu Lys Pro Met Val Ile Leu Pro Tyr Met Asn Trp Gly Asn Leu Lys
        275   280   285

Leu Phe Leu Arg Gln Cys Lys Leu Val Glu Ala Asn Asn Pro Gln Ala

```
                290                    295                    300

       Ile Ser Gln Gln Asp Leu Val His Met Ala Ile Gln Ile Ala Cys Gly
       305                 310                 315                 320

       Met Ser Tyr Leu Ala Arg Arg Glu Val Ile His Lys Asp Leu Ala Ala
                       325                 330                 335

       Arg Asn Cys Val Gly Pro Leu Glu
                   340
```

<210> 151
<211> 141
<212> PRT
<213> Homo sapiens

<400> 151

```
       Met Glu Ala Ile Arg Thr Asp Asn Gln Asn Phe Ala Ser Gln Leu Arg
       1               5                   10                  15

       Glu Ala Glu Ala Arg Asn Arg Asp Leu Glu Ala His Val Arg Gln Leu
                       20                  25                  30

       Gln Glu Arg Met Glu Leu Leu Gln Ala Glu Gly Ala Thr Ala Val Thr
                   35                  40                  45

       Gly Val Pro Ser Pro Arg Ala Thr Asp Pro Pro Ser His Leu Asp Gly
           50                  55                  60

       Pro Pro Ala Val Ala Val Gly Gln Cys Pro Leu Val Gly Pro Gly Pro
       65                  70                  75                  80

       Met His Arg Arg His Leu Leu Leu Pro Ala Arg Val Pro Arg Pro Gly
                       85                  90                  95

       Leu Ser Glu Ala Leu Ser Leu Leu Leu Phe Ala Val Val Leu Ser Arg
                   100                 105                 110

       Ala Ala Ala Leu Gly Cys Ile Gly Leu Val Ala His Ala Gly Gln Leu
                   115                 120                 125

       Thr Ala Val Trp Arg Arg Pro Gly Ala Ala Arg Ala Pro
           130                 135                 140
```

<210> 152
<211> 106
<212> PRT
<213> Homo sapiens

<400> 152

```
       Met Glu Leu Leu Gln Ala Glu Gly Ala Thr Ala Val Thr Gly Val Pro
       1               5                   10                  15

       Ser Pro Arg Ala Thr Asp Pro Pro Ser His Leu Asp Gly Pro Pro Ala
                       20                  25                  30
```

Val Ala Val Gly Gln Cys Pro Leu Val Gly Pro Gly Pro Met His Arg
        35   40   45

Arg His Leu Leu Leu Pro Ala Arg Val Pro Arg Pro Gly Leu Ser Glu
        50   55   60

Ala Leu Ser Leu Leu Leu Phe Ala Val Val Leu Ser Arg Ala Ala Ala
65   70   75   80

Leu Gly Cys Ile Gly Leu Val Ala His Ala Gly Gln Leu Thr Ala Val
                85   90   95

Trp Arg Arg Pro Gly Ala Ala Arg Ala Pro
            100   105

<210>   153
<211>   50
<212>   PRT
<213>   Homo sapiens

<400>   153

Met Val Asn Leu Ser His Glu Asp Phe Glu Phe Ile Ser Gly Thr Arg
1   5   10   15

Met Arg Lys Leu Ala Arg Glu Gly Gln Lys Pro Pro Glu Gly Phe Met
        20   25   30

Ala Pro Lys Ala Trp Thr Val Leu Thr Glu Tyr Tyr Lys Ser Leu Glu
        35   40   45

Lys Ala
    50

<210>   154
<211>   238
<212>   PRT
<213>   Homo sapiens

<400>   154

Met Ala Arg Thr Thr Ser Gln Leu Tyr Asp Ala Val Pro Ile Gln Ser
1   5   10   15

Ser Val Val Leu Cys Ser Cys Pro Ser Pro Ser Met Val Arg Thr Gln
            20   25   30

Thr Glu Ser Ser Thr Pro Pro Gly Ile Pro Gly Gly Ser Arg Gln Gly
        35   40   45

Pro Ala Met Asp Gly Thr Ala Ala Glu Pro Arg Pro Gly Ala Gly Ser
    50   55   60

Leu Gln His Ala Gln Pro Pro Pro Gln Pro Arg Lys Lys Arg Pro Glu
65   70   75   80

```
Asp Phe Lys Phe Gly Lys Ile Leu Gly Glu Gly Ser Phe Ser Thr Val
                85              90              95

Val Leu Ala Arg Glu Leu Ala Thr Ser Arg Glu Tyr Ala Ile Lys Ile
            100             105             110

Leu Glu Lys Arg His Ile Ile Lys Glu Asn Lys Val Pro Tyr Val Thr
            115             120             125

Arg Glu Arg Asp Val Met Ser Arg Leu Asp His Pro Phe Phe Val Lys
        130             135             140

Leu Tyr Phe Thr Phe Gln Asp Asp Glu Lys Leu Tyr Phe Gly Leu Ser
145             150             155             160

Tyr Ala Lys Asn Gly Glu Leu Leu Lys Tyr Ile Arg Lys Ile Gly Ser
            165             170             175

Phe Asp Glu Thr Cys Thr Arg Phe Tyr Thr Ala Glu Ile Val Ser Ala
            180             185             190

Leu Glu Tyr Leu His Gly Lys Gly Ile Ile His Arg Asp Leu Lys Pro
            195             200             205

Glu Asn Ile Leu Leu Asn Glu Asp Met His Ile Gln Ile Thr Asp Phe
        210             215             220

Gly Thr Ala Lys Val Leu Ser Pro Glu Ser Lys Gln Val Cys
225             230             235

<210>    155
<211>    73
<212>    PRT
<213>    Homo sapiens

<400>    155

Met Ser Asp Val Thr Ile Val Lys Glu Gly Trp Val Gln Lys Arg Gly
1               5               10              15

Glu Tyr Ile Lys Asn Trp Arg Pro Arg Tyr Phe Leu Leu Lys Thr Asp
            20              25              30

Gly Ser Phe Ile Gly Tyr Lys Glu Lys Pro Gln Asp Val Asp Leu Pro
            35              40              45

Tyr Pro Leu Asn Asn Phe Ser Val Ala Ser Ser Val Met Phe Arg Tyr
        50              55              60

Leu Gln Asn Leu Thr Leu Asn Gln Val
65                      70

<210>    156
<211>    213
<212>    PRT
<213>    Homo sapiens
```

<400> 156

Met Ser Asp Val Thr Ile Val Lys Glu Gly Trp Val Gln Lys Arg Gly
1   5   10   15

Glu Tyr Ile Lys Asn Trp Arg Pro Arg Tyr Phe Leu Leu Lys Thr Asp
            20   25   30

Gly Ser Phe Ile Gly Tyr Lys Glu Lys Pro Gln Asp Val Asp Leu Pro
        35   40   45

Tyr Pro Leu Asn Asn Phe Ser Val Ala Lys Cys Gln Leu Met Lys Thr
    50   55   60

Glu Arg Pro Lys Pro Asn Thr Phe Ile Ile Arg Cys Leu Gln Trp Thr
65   70   75   80

Thr Val Ile Glu Arg Thr Phe His Val Asp Thr Pro Glu Glu Arg Glu
            85   90   95

Glu Trp Thr Glu Ala Ile Gln Ala Val Ala Asp Arg Leu Gln Arg Gln
            100   105   110

Glu Glu Glu Arg Met Asn Cys Ser Pro Thr Ser Gln Ile Asp Asn Ile
        115   120   125

Gly Glu Glu Glu Met Asp Ala Ser Thr Thr His His Lys Arg Lys Thr
    130   135   140

Met Asn Asp Phe Asp Tyr Leu Lys Leu Leu Gly Lys Gly Thr Phe Gly
145   150   155   160

Lys Val Ile Leu Val Arg Glu Lys Ala Ser Gly Lys Tyr Tyr Ala Met
            165   170   175

Lys Ile Leu Lys Lys Glu Val Ile Ile Ala Lys Val Thr Asp Leu Leu
        180   185   190

Lys Leu Ile Thr Lys Phe Leu Phe Ala Val Cys Met Cys Leu Trp Ala
    195   200   205

His Glu Phe Thr Cys
    210

<210> 157
<211> 352
<212> PRT
<213> Homo sapiens

<400> 157

Met Gly Gly Lys Pro Ala Asn Arg Met Met Pro Tyr Pro Phe Pro Ser
1   5   10   15

Gly Thr Trp Lys Val Lys Trp Val Ala Ser Arg Asn Ala Phe Lys Pro
            20   25   30

Arg Ile Gly Ile Leu Ile Lys Thr Leu Ile Tyr Ser Ser Gln Phe Pro
          35   40   45

Leu Gly Asn Leu Glu Lys Ile Ser Gln Leu Leu Ser Lys Ser Ala Gln
          50   55   60

Cys Pro Leu Arg Val His Tyr Leu Ser Ser Gln Tyr Gly Asp Glu Arg
65   70   75   80

Cys Phe Met Phe Val Leu Ile Ser Pro Thr Lys Ser Val Ile Ile Thr
                    85   90   95

Ile Leu Ser Leu Leu Phe Thr Leu Gln Leu Phe Phe His Leu Ser Arg
              100   105   110

Glu Arg Val Phe Ser Glu Asp Arg Thr Arg Phe Tyr Gly Ala Glu Ile
          115   120   125

Val Ser Ala Leu Asp Tyr Leu His Ser Gly Lys Ile Val Tyr Arg Asp
      130   135   140

Leu Lys Leu Glu Asn Leu Met Leu Asp Lys Asp Gly His Ile Lys Ile
145   150   155   160

Thr Asp Phe Gly Leu Cys Lys Glu Gly Ile Thr Asp Ala Ala Thr Met
              165   170   175

Lys Thr Phe Cys Gly Thr Pro Glu Tyr Leu Ala Pro Glu Val Leu Glu
              180   185   190

Asp Asn Asp Tyr Gly Arg Ala Val Asp Trp Trp Gly Leu Gly Val Val
          195   200   205

Met Tyr Glu Met Met Cys Gly Arg Leu Pro Phe Tyr Asn Gln Asp His
      210   215   220

Glu Lys Leu Phe Glu Leu Ile Leu Met Glu Asp Ile Lys Phe Pro Arg
225   230   235   240

Thr Leu Ser Ser Asp Ala Lys Ser Leu Leu Ser Gly Leu Leu Ile Lys
              245   250   255

Asp Pro Asn Lys Arg Leu Gly Gly Gly Pro Asp Asp Ala Lys Glu Ile
          260   265   270

Met Arg His Ser Phe Phe Ser Gly Val Asn Trp Gln Asp Val Tyr Asp
      275   280   285

Lys Lys Leu Val Pro Pro Phe Lys Pro Gln Val Thr Ser Glu Thr Asp
      290   295   300

Thr Arg Tyr Phe Asp Glu Glu Phe Thr Ala Gln Thr Ile Thr Ile Thr
305   310   315   320

Pro Pro Glu Lys Tyr Asp Glu Asp Gly Met Asp Cys Met Asp Asn Glu
              325   330   335

```
Arg Arg Pro His Phe Pro Gln Phe Ser Tyr Ser Ala Ser Gly Arg Glu
        340             345             350


<210>   158
<211>   132
<212>   PRT
<213>   Homo sapiens


<400>   158


Met Glu Leu Leu Arg Thr Ile Thr Tyr Gln Pro Ala Ala Ser Thr Lys
1               5               10              15


Met Cys Glu Gln Ala Leu Gly Lys Gly Cys Gly Gly Asn Ser Lys Lys
        20              25              30


Lys Arg Pro Pro Gln Pro Pro Glu Glu Ser Gln Pro Pro Gln Ser Gln
        35              40              45


Ala Gln Val Pro Pro Ala Ala Pro His His His His His Ser His
    50              55              60


Ser Gly Pro Glu Ile Ser Arg Ile Ile Val Asp Pro Thr Thr Gly Lys
65              70              75              80


Arg Tyr Cys Arg Gly Lys Val Leu Gly Lys Gly Gly Phe Ala Lys Cys
            85              90              95


Tyr Glu Met Thr Asp Leu Thr Asn Asn Lys Val Tyr Ala Ala Lys Ile
            100             105             110


Ile Pro His Ser Arg Val Ala Lys Pro His Gln Arg Glu Lys Val Cys
        115             120             125


Met Thr Leu Glu
        130

<210>   159
<211>   192
<212>   PRT
<213>   Homo sapiens


<400>   159


Met Glu Leu Leu Arg Thr Ile Thr Tyr Gln Pro Ala Ala Ser Thr Lys
1               5               10              15


Met Cys Glu Gln Ala Leu Gly Lys Gly Cys Gly Gly Asn Ser Lys Lys
        20              25              30


Lys Arg Pro Pro Gln Pro Pro Glu Glu Ser Gln Pro Pro Gln Ser Gln
        35              40              45


Ala Gln Val Pro Pro Ala Ala Pro His His His His His His Ser His
    50              55              60


Ser Gly Pro Glu Ile Ser Arg Ile Ile Val Asp Pro Thr Thr Gly Lys
```

Arg Tyr Cys Arg Gly Lys Val Leu Gly Lys Gly Gly Phe Ala Lys Cys
                85   90   95

Tyr Glu Met Thr Asp Leu Thr Asn Asn Lys Val Tyr Ala Ala Lys Ile
            100   105   110

Ile Pro His Ser Arg Val Ala Lys Pro His Gln Arg Glu Lys Ile Asp
            115   120   125

Lys Glu Ile Glu Leu His Arg Ile Leu His His Lys His Val Val Gln
    130   135   140

Phe Tyr His Tyr Phe Glu Asp Lys Glu Asn Ile Tyr Ile Leu Leu Glu
145   150   155   160

Tyr Cys Ser Arg Arg Val Ser Val Asn Ser Tyr Leu Arg Thr Phe Ala
                165   170   175

Tyr Pro Glu Leu Thr Trp Tyr Ser Lys Ser Ile Leu Ser Gly Ile Thr
            180   185   190

<210> 160
<211> 207
<212> PRT
<213> Homo sapiens

<400> 160

Met Glu Leu Leu Arg Thr Ile Thr Tyr Gln Pro Ala Ala Ser Thr Lys
1   5   10   15

Met Cys Glu Gln Ala Leu Gly Lys Gly Cys Gly Gly Asn Ser Lys Lys
            20   25   30

Lys Arg Pro Pro Gln Pro Pro Glu Glu Ser Gln Pro Pro Gln Ser Gln
        35   40   45

Ala Gln Val Pro Pro Ala Ala Pro His His His His His His Ser His
    50   55   60

Ser Gly Pro Glu Ile Ser Arg Ile Ile Val Asp Pro Thr Thr Gly Lys
65   70   75   80

Arg Tyr Cys Arg Gly Lys Val Leu Gly Lys Gly Gly Phe Ala Lys Cys
                85   90   95

Tyr Glu Met Thr Asp Leu Thr Asn Asn Lys Val Tyr Ala Ala Lys Ile
            100   105   110

Ile Pro His Ser Arg Val Ala Lys Pro His Gln Arg Glu Lys Ile Asp
            115   120   125

Lys Glu Ile Glu Leu His Arg Ile Leu His His Lys His Val Val Gln
    130   135   140

Phe Tyr His Tyr Phe Glu Asp Lys Glu Asn Ile Tyr Ile Leu Leu Glu
145   150   155   160

Tyr Cys Ser Arg Arg Leu Gln Gly Ser Gln Lys Asn Asp Leu Glu Tyr
                165   170   175

Val Glu Glu Asp Gly His Val Val Val Arg Lys Gln Phe Pro Cys Gly
                180   185   190

Leu Leu Asp Trp Val Glu Pro Glu Gln Ala Lys Ala Tyr Ser Ser
            195   200   205

<210> 161
<211> 337
<212> PRT
<213> Homo sapiens

<400> 161

Met Ser Asp Lys Asp Leu Arg Thr Ala Ala Ala Gly Gly Gly His Leu
1   5   10   15

Val Ala Ile Leu Thr Val Phe Ile Pro Gln Lys Asp Leu Val Glu Glu
                20   25   30

Glu Ala Glu Glu Ala Gly Val Ala Leu Arg Ser Thr Gln Ser Thr Leu
            35   40   45

Gln Ala Gly Leu Ala Ala Asp Ala Trp Ala Ala Pro Ile Ala Met Gln
        50   55   60

Ile Tyr Lys Lys His Leu Asp Pro Arg Pro Gly Pro Cys His Leu Ser
65   70   75   80

Trp Ala Trp Ala Trp Ala Ser Trp Pro Ala Ala Ala Cys Thr Ala Gly
                85   90   95

Pro Lys Gly Arg Pro Pro Met Thr Gln Val Tyr Glu Arg Leu Glu Lys
                100   105   110

Leu Gln Ala Val Val Ala Gly Val Pro Gly His Leu Glu Ala Ala Ser
            115   120   125

Cys Ile Pro Phe Pro Gln Glu Asn Ser Tyr Val Ser Ser Thr Gly Arg
        130   135   140

Ala Ser Ala Gln Ala Ala Glu Gln Leu Gln Arg Gly Pro Asn Gln Pro
145   150   155   160

Val Glu Ser Asp Glu Ser Leu Gly Gly Leu Ser Ala Ala Leu Arg Ser
                165   170   175

Trp His Leu Thr Pro Ser Cys Pro Leu Asp Pro Ala Pro Leu Arg Glu
            180   185   190

Ala Gly Cys Pro Gln Gly Asp Thr Ala Gly Glu Ser Ser Trp Gly Ser
            195   200   205

Gly Pro Gly Ser Arg Pro Thr Ala Val Glu Gly Leu Ala Leu Gly Ser
    210   215   220

Ser Ala Ser Ser Ser Ser Glu Pro Pro Gln Ile Ile Ile Asn Pro Ala
225   230   235   240

Arg Gln Lys Met Val Gln Lys Leu Ala Leu Tyr Glu Asp Gly Ala Leu
            245   250   255

Asp Ser Leu Gln Leu Leu Ser Ser Ser Ser Leu Pro Gly Leu Gly Leu
            260   265   270

Glu Gln Asp Arg Gln Gly Pro Lys Lys Val Met Asn Phe Arg Ala Asp
            275   280   285

Val Phe Thr Trp Ala Asp Pro Pro Asn Pro Glu Val Lys Val Leu Met
    290   295   300

Val Arg Ser Ser His Gly Ala Arg Val Leu Ser Thr Leu Pro Ala Val
305   310   315   320

Gly Val Gly Ala His Ala Arg Trp Gly Glu Lys Glu Val Ala Leu Leu
            325   330   335

Phe

<210>   162
<211>   122
<212>   PRT
<213>   Homo sapiens

<400>   162

Met Gly His Ala Leu Cys Val Cys Ser Arg Gly Thr Val Ile Ile Asp
1   5   10   15

Asn Lys Arg Tyr Leu Phe Ile Gln Lys Leu Gly Glu Gly Gly Phe Ser
            20   25   30

Tyr Val Asp Leu Val Glu Gly Leu His Asp Gly His Phe Tyr Ala Leu
            35   40   45

Lys Arg Ile Leu Cys His Glu Gln Gln Asp Arg Glu Glu Ala Gln Arg
    50   55   60

Glu Ala Asp Met His Arg Leu Phe Asn His Pro Asn Ile Leu Arg Leu
65   70   75   80

Val Ala Tyr Cys Leu Arg Glu Arg Gly Ala Lys His Glu Ala Trp Leu
            85   90   95

Leu Leu Pro Phe Phe Lys Val Arg Lys Thr Pro Val Tyr Gly Gly Gly
            100   105   110

Cys Ser Arg Ala Thr Tyr Ser Arg Ala Val

<210> 163
<211> 842
<212> PRT
<213> Homo sapiens

<400> 163

```
Met Glu Arg Ala Ile Ser Pro Gly Leu Leu Val Arg Ala Leu Leu Leu
1               5                   10                  15

Leu Leu Leu Leu Gly Leu Ala Ala Arg Thr Val Ala Ala Gly Arg Ala
            20                  25                  30

Arg Gly Leu Pro Ala Pro Thr Ala Glu Ala Ala Phe Gly Leu Gly Ala
        35                  40                  45

Ala Ala Ala Pro Thr Ser Ala Thr Arg Val Pro Ala Ala Gly Ala Val
    50                  55                  60

Ala Ala Ala Glu Val Thr Val Glu Asp Ala Glu Ala Leu Pro Ala Ala
65                  70                  75                  80

Ala Gly Glu Gln Glu Pro Arg Gly Pro Glu Pro Asp Asp Glu Thr Glu
                85                  90                  95

Leu Arg Pro Arg Gly Arg Ser Leu Val Ile Ile Ser Thr Leu Asp Gly
            100                 105                 110

Arg Ile Ala Ala Leu Asp Pro Glu Asn His Gly Lys Lys Gln Trp Asp
        115                 120                 125

Leu Asp Val Gly Ser Gly Ser Leu Val Ser Ser Ser Leu Ser Lys Pro
    130                 135                 140

Glu Val Phe Gly Asn Lys Met Ile Ile Pro Ser Leu Asp Gly Ala Leu
145                 150                 155                 160

Phe Gln Trp Asp Arg Asp Arg Glu Ser Met Glu Thr Val Pro Phe Thr
                165                 170                 175

Val Glu Ser Leu Leu Glu Ser Ser Tyr Lys Phe Gly Asp Asp Val Val
            180                 185                 190

Leu Val Gly Gly Lys Ser Leu Thr Thr Tyr Gly Leu Ser Ala Tyr Ser
            195                 200                 205

Gly Lys Val Arg Tyr Ile Cys Ser Ala Leu Gly Cys Arg Gln Trp Asp
    210                 215                 220

Ser Asp Glu Met Glu Gln Glu Glu Asp Ile Leu Leu Leu Gln Arg Thr
225                 230                 235                 240

Gln Lys Thr Val Arg Ala Val Gly Pro Arg Ser Gly Asn Glu Lys Trp
            245                 250                 255
```

```
Asn Phe Ser Val Gly His Phe Glu Leu Arg Tyr Ile Pro Asp Met Glu
            260                 265                 270

Thr Arg Ala Gly Phe Ile Glu Ser Thr Phe Lys Pro Asn Glu Asn Thr
            275                 280                 285

Glu Glu Ser Lys Ile Ile Ser Asp Val Glu Glu Gln Glu Ala Ala Ile
    290                 295                 300

Met Asp Ile Val Ile Lys Val Ser Val Ala Asp Trp Lys Val Met Ala
305                 310                 315                 320

Phe Ser Lys Lys Gly Gly His Leu Glu Trp Glu Tyr Gln Phe Cys Thr
                325                 330                 335

Pro Ile Ala Ser Ala Trp Leu Leu Lys Asp Gly Lys Val Ile Pro Ile
            340                 345                 350

Ser Leu Phe Asp Asp Thr Ser Tyr Thr Ser Asn Asp Asp Val Leu Glu
            355                 360                 365

Asp Glu Glu Asp Ile Val Glu Ala Ala Arg Gly Ala Thr Glu Asn Ser
    370                 375                 380

Val Tyr Leu Gly Met Tyr Arg Gly Gln Leu Tyr Leu Gln Ser Ser Val
385                 390                 395                 400

Arg Ile Ser Glu Lys Phe Pro Ser Ser Pro Lys Ala Leu Glu Ser Val
                405                 410                 415

Thr Asn Glu Asn Ala Ile Ile Pro Leu Pro Thr Ile Lys Trp Lys Pro
                420                 425                 430

Leu Ile His Ser Pro Ser Arg Thr Pro Val Leu Val Gly Ser Asp Glu
            435                 440                 445

Phe Asp Lys Cys Leu Ser Asn Asp Lys Phe Ser His Glu Glu Tyr Ser
    450                 455                 460

Asn Gly Ala Leu Ser Ile Leu Gln Tyr Pro Tyr Asp Asn Gly Tyr Tyr
465                 470                 475                 480

Leu Pro Tyr Tyr Lys Arg Glu Arg Asn Lys Arg Ser Thr Gln Ile Thr
                485                 490                 495

Val Arg Phe Leu Asp Asn Pro His Tyr Asn Lys Asn Ile Arg Lys Lys
            500                 505                 510

Asp Pro Val Leu Leu Leu His Trp Trp Lys Glu Ile Val Ala Thr Ile
            515                 520                 525

Leu Phe Cys Ile Ile Ala Thr Thr Phe Ile Val Arg Arg Leu Phe His
            530                 535                 540

Pro His Pro His Arg Gln Arg Lys Glu Ser Glu Thr Gln Cys Gln Thr
545                 550                 555                 560
```

Glu Asn Lys Tyr Asp Ser Val Ser Gly Glu Ala Asn Asp Ser Ser Trp
565   570   575

Asn Asp Ile Lys Asn Ser Gly Tyr Ile Ser Arg Tyr Leu Thr Asp Phe
580   585   590

Glu Pro Ile Gln Cys Leu Gly Arg Gly Gly Phe Gly Val Val Phe Glu
595   600   605

Ala Lys Asn Lys Val Asp Asp Cys Asn Tyr Ala Ile Lys Arg Ile Arg
610   615   620

Leu Pro Asn Arg Glu Leu Ala Arg Glu Lys Val Met Arg Glu Val Lys
625   630   635   640

Ala Leu Ala Lys Leu Glu His Pro Gly Ile Val Arg Tyr Phe Asn Ala
645   650   655

Trp Leu Glu Ala Pro Pro Glu Lys Trp Gln Glu Lys Met Asp Glu Ile
660   665   670

Trp Leu Lys Asp Glu Ser Thr Asp Trp Pro Leu Ser Ser Pro Ser Pro
675   680   685

Met Asp Ala Pro Ser Val Lys Ile Arg Arg Met Asp Pro Phe Ser Thr
690   695   700

Lys Glu His Ile Glu Ile Ile Ala Pro Ser Pro Gln Arg Ser Arg Ser
705   710   715   720

Phe Ser Val Gly Ile Ser Cys Asp Gln Thr Ser Ser Ser Glu Ser Gln
725   730   735

Phe Ser Pro Leu Glu Phe Ser Gly Met Asp His Glu Asp Ile Ser Glu
740   745   750

Ser Val Asp Ala Ala Tyr Asn Leu Gln Asp Ser Cys Leu Thr Asp Cys
755   760   765

Asp Val Glu Asp Gly Thr Met Asp Gly Asn Asp Glu Gly His Ser Phe
770   775   780

Glu Leu Cys Pro Ser Glu Ala Ser Pro Tyr Val Arg Ser Arg Glu Arg
785   790   795   800

Thr Ser Ser Ser Ile Val Phe Glu Asp Ser Gly Cys Asp Asn Ala Ser
805   810   815

Ser Lys Glu Glu Pro Lys Thr Asn Arg Leu His Ile Gly Asn His Cys
820   825   830

Ala Asn Lys Leu Thr Val Thr Val Leu Phe
835   840

<210>   164
<211>   743
<212>   PRT

<213> Homo sapiens

<400> 164

Met Gly Ser Arg Ala Gln Lys Ser Ala Gly Asn Ala Glu Leu Trp Glu
1   5   10   15

Pro Leu Pro Glu Gly Arg Pro Arg Pro Ala Gly Thr Ser Ser Ala Val
            20   25   30

Ser Ala Trp Ala Ser Leu Lys Leu Cys Leu Arg Gly Gly Ser Gly Arg
            35   40   45

Arg Gln Arg Leu Gly Gly Gly Arg Met Gln Pro Glu Glu Gly His Arg
        50   55   60

Leu Ala Ala Gly Ala Ala Val Arg Gly Ala Ala Ala Thr Val Leu Leu
65   70   75   80

Arg Leu Arg Asp Asp Leu Asn Val Thr Arg Leu Ser His Phe Glu Tyr
            85   90   95

Val Lys Asn Glu Asp Leu Glu Lys Ile Gly Met Gly Arg Pro Gly Gln
            100   105   110

Arg Arg Leu Trp Glu Ala Val Lys Arg Arg Lys Ala Leu Cys Lys Arg
        115   120   125

Lys Ser Trp Met Asn Lys Val Phe Ser Gly Lys Arg Leu Glu Ala Glu
        130   135   140

Phe Pro Pro His His Ser Gln Ser Thr Phe Arg Lys Thr Ser Pro Ala
145   150   155   160

Pro Gly Gly Pro Ala Gly Glu Gly Pro Leu Gln Ser Leu Thr Cys Leu
                165   170   175

Ile Gly Glu Lys Asp Leu Arg Leu Leu Glu Lys Leu Gly Asp Gly Ser
            180   185   190

Phe Gly Val Val Arg Arg Gly Glu Trp Asp Ala Pro Ser Gly Lys Thr
        195   200   205

Val Ser Pro Pro Gln Pro Ala Phe Phe Thr Gln Lys Pro Thr Tyr Asp
    210   215   220

Pro Val Ser Glu Asp Gln Asp Pro Leu Ser Ser Asp Phe Lys Arg Leu
225   230   235   240

Gly Leu Arg Lys Pro Gly Leu Pro Arg Gly Leu Trp Leu Ala Lys Pro
            245   250   255

Ser Ala Arg Val Pro Gly Thr Lys Ala Ser Arg Gly Ser Gly Ala Glu
            260   265   270

Val Thr Leu Ile Asp Phe Gly Glu Glu Pro Val Val Pro Ala Leu Arg
        275   280   285

```
Pro Cys Ala Pro Ser Leu Ala Gln Leu Ala Met Asp Ala Cys Ser Leu
    290                 295                 300

Leu Asp Glu Thr Pro Pro Gln Ser Pro Thr Arg Ala Leu Pro Arg Pro
305                 310                 315                 320

Leu His Pro Thr Pro Val Val Asp Trp Asp Ala Arg Pro Leu Pro Pro
                325                 330                 335

Pro Pro Ala Tyr Asp Asp Val Ala Gln Asp Glu Asp Asp Phe Glu Ile
                340                 345                 350

Cys Ser Ile Asn Ser Thr Leu Val Gly Ala Gly Val Pro Ala Gly Pro
                355                 360                 365

Ser Gln Gly Gln Thr Asn Tyr Ala Phe Val Pro Glu Gln Ala Arg Pro
    370                 375                 380

Pro Pro Pro Leu Glu Asp Asn Leu Phe Leu Pro Pro Gln Gly Gly Gly
385                 390                 395                 400

Lys Pro Pro Ser Ser Ala Gln Thr Ala Glu Ile Phe Gln Ala Leu Gln
                405                 410                 415

Gln Glu Cys Met Arg Gln Leu Gln Ala Pro Ala Gly Ser Pro Ala Pro
                420                 425                 430

Ser Pro Ser Pro Gly Gly Asp Asp Lys Pro Gln Val Pro Pro Arg Val
                435                 440                 445

Pro Ile Pro Pro Arg Pro Thr Arg Pro His Val Gln Leu Ser Pro Ala
    450                 455                 460

Pro Pro Gly Glu Glu Glu Thr Ser Gln Trp Pro Gly Pro Ala Ser Pro
465                 470                 475                 480

Pro Arg Val Pro Pro Arg Glu Pro Leu Ser Pro Gln Gly Ser Arg Thr
                485                 490                 495

Pro Ser Pro Leu Val Pro Pro Gly Ser Ser Pro Leu Pro Pro Arg Leu
                500                 505                 510

Ser Ser Ser Pro Gly Lys Thr Met Pro Thr Thr Gln Ser Phe Ala Ser
                515                 520                 525

Asp Pro Lys Tyr Ala Thr Pro Gln Val Ile Gln Ala Pro Gly Pro Arg
    530                 535                 540

Ala Gly Pro Cys Ile Leu Pro Ile Val Arg Asp Gly Lys Lys Val Ser
545                 550                 555                 560

Ser Thr His Tyr Tyr Leu Leu Pro Glu Arg Pro Ser Tyr Leu Glu Arg
                565                 570                 575

Tyr Gln Arg Phe Leu Arg Glu Ala Gln Ser Pro Glu Glu Pro Thr Pro
                580                 585                 590
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Leu Pro Val Pro Leu Leu Leu Pro Pro Pro Ser Thr Pro Ala Pro Ala
        595             600             605

Ala Pro Thr Ala Thr Val Arg Pro Met Pro Gln Ala Ala Leu Asp Pro
        610             615             620

Lys Ala Asn Phe Ser Thr Asn Asn Ser Asn Pro Gly Ala Arg Pro Pro
625             630             635             640

Pro Pro Arg Ala Thr Ala Arg Leu Pro Gln Arg Gly Cys Pro Gly Asp
            645             650             655

Gly Pro Glu Ala Gly Arg Pro Ala Asp Lys Ile Gln Met Ala Met Val
        660             665             670

His Gly Val Thr Thr Glu Glu Cys Gln Ala Ala Leu Gln Cys His Gly
        675             680             685

Trp Ser Val Gln Arg Ala Cys Pro Val Ser Glu Gly Gly Ala Ala Leu
        690             695             700

Arg Ala Gly Ser Ala Ala Gln Arg Glu Cys His Lys Val Leu Glu Met
705             710             715             720

Phe Asp Trp Asn Leu Glu Gln Ala Gly Cys His Leu Leu Gly Ser Trp
            725             730             735

Gly Pro Ala His His Lys Arg
        740

<210>   165
<211>   604
<212>   PRT
<213>   Homo sapiens

<400>   165

Met Ala Ser Asn Pro Glu Arg Gly Glu Ile Leu Leu Thr Glu Leu Gln
1               5               10              15

Gly Asp Ser Arg Ser Leu Pro Phe Ser Glu Asn Val Ser Ala Val Gln
            20              25              30

Lys Leu Asp Phe Ser Asp Thr Met Val Gln Gln Lys Leu Asp Asp Ile
        35              40              45

Lys Asp Arg Ile Lys Arg Glu Ile Arg Lys Glu Leu Lys Ile Lys Glu
        50              55              60

Gly Ala Glu Asn Leu Arg Lys Val Thr Thr Asp Lys Lys Ser Leu Ala
65              70              75              80

Tyr Val Asp Asn Ile Leu Lys Lys Ser Asn Lys Lys Leu Glu Glu Leu
            85              90              95

His His Lys Leu Gln Glu Leu Asn Ala His Ile Val Val Ser Asp Pro
```

Glu Asp Ile Thr Asp Cys Pro Arg Thr Pro Asp Thr Pro Asn Asn Asp
        115   120   125

Pro Arg Cys Ser Thr Ser Asn Asn Arg Leu Lys Ala Leu Gln Lys Gln
        130   135   140

Leu Asp Ile Glu Leu Lys Val Lys Gln Gly Ala Glu Asn Met Ile Gln
145   150   155   160

Met Tyr Ser Asn Gly Ser Ser Lys Asp Arg Lys Leu His Gly Thr Ala
                165   170   175

Gln Gln Leu Leu Gln Asp Ser Lys Thr Lys Ile Glu Val Ile Arg Met
                180   185   190

Gln Ile Leu Gln Ala Val Gln Thr Asn Glu Leu Ala Phe Asp Asn Ala
        195   200   205

Lys Pro Val Ile Ser Pro Leu Glu Leu Arg Met Glu Glu Leu Arg His
        210   215   220

His Phe Arg Ile Glu Phe Ala Val Ala Glu Gly Ala Lys Asn Val Met
225   230   235   240

Lys Leu Leu Gly Ser Gly Lys Val Thr Asp Arg Lys Ala Leu Ser Glu
                245   250   255

Ala Gln Ala Arg Phe Asn Glu Ser Ser Gln Lys Leu Asp Leu Leu Lys
                260   265   270

Tyr Ser Leu Glu Gln Arg Leu Asn Glu Val Pro Lys Asn His Pro Lys
        275   280   285

Ser Arg Ile Ile Ile Glu Glu Leu Ser Leu Val Ala Ala Ser Pro Thr
        290   295   300

Leu Ser Pro Arg Gln Ser Met Ile Ser Thr Gln Asn Gln Tyr Ser Thr
305   310   315   320

Leu Ser Lys Pro Ala Ala Leu Thr Gly Thr Leu Glu Val Arg Leu Met
                325   330   335

Gly Cys Gln Asp Ile Leu Glu Asn Val Pro Gly Arg Ser Lys Ala Thr
                340   345   350

Ser Val Ala Leu Pro Gly Trp Ser Pro Ser Glu Thr Arg Ser Ser Phe
                355   360   365

Met Ser Arg Thr Ser Lys Ser Lys Ser Gly Ser Ser Arg Asn Leu Leu
        370   375   380

Lys Thr Asp Asp Leu Ser Asn Asp Val Cys Ala Val Leu Lys Leu Asp
385   390   395   400

Asn Thr Val Val Gly Gln Thr Ser Trp Lys Pro Ile Ser Asn Gln Ser

Trp Asp Gln Lys Phe Thr Leu Glu Leu Asp Arg Ser Arg Glu Leu Glu
        420   425   430

Ile Ser Val Tyr Trp Arg Asp Trp Arg Ser Leu Cys Ala Val Lys Phe
        435   440   445

Leu Arg Leu Glu Asp Phe Leu Asp Asn Gln Arg His Gly Met Cys Leu
    450   455   460

Tyr Leu Glu Pro Gln Gly Thr Leu Phe Ala Glu Val Thr Phe Phe Asn
465   470   475   480

Pro Val Ile Glu Arg Arg Pro Lys Leu Gln Arg Gln Lys Lys Ile Phe
            485   490   495

Ser Lys Gln Gln Gly Lys Thr Phe Leu Arg Ala Pro Gln Met Asn Ile
        500   505   510

Asn Ile Ala Thr Trp Gly Arg Leu Val Arg Arg Ala Ile Pro Thr Val
        515   520   525

Asn His Ser Gly Thr Phe Ser Pro Gln Ala Pro Val Pro Thr Thr Val
    530   535   540

Pro Val Val Asp Val Arg Ile Pro Gln Leu Ala Pro Pro Ala Arg Tyr
545   550   555   560

Val Ser Glu Ile Leu Ser Ile Ser Tyr Thr Lys Leu Leu Gly His Ser
            565   570   575

Tyr Val Leu Ile Ile Ala Gly Val Leu Ser Leu Ala Phe Phe Pro Ser
            580   585   590

Ser Ile Leu Lys Val Val Phe Cys Leu Leu Lys Lys
        595   600

<210> 166
<211> 613
<212> PRT
<213> Homo sapiens

<400> 166

Met Ala Ser Asn Pro Glu Arg Gly Glu Ile Leu Leu Thr Glu Leu Gln
1   5   10   15

Gly Asp Ser Arg Ser Leu Pro Phe Ser Glu Asn Val Ser Ala Val Gln
            20   25   30

Lys Leu Asp Phe Ser Asp Thr Met Val Gln Gln Lys Leu Asp Asp Ile
        35   40   45

Lys Asp Arg Ile Lys Arg Glu Ile Arg Lys Glu Leu Lys Ile Lys Glu
    50   55   60

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Gly Ala Glu Asn Leu Arg Lys Val Thr Thr Asp Lys Lys Ser Leu Ala
65              70              75                      80

Tyr Val Asp Asn Ile Leu Lys Lys Ser Asn Lys Lys Leu Glu Glu Leu
            85              90                  95

His His Lys Leu Gln Glu Leu Asn Ala His Ile Val Val Ser Asp Pro
        100             105             110

Glu Asp Ile Thr Asp Cys Pro Arg Thr Pro Asp Thr Pro Asn Asn Asp
        115             120             125

Pro Arg Cys Ser Thr Ser Asn Asn Arg Leu Lys Ala Leu Gln Lys Gln
    130             135             140

Leu Asp Ile Glu Leu Lys Val Lys Gln Gly Ala Glu Asn Met Ile Gln
145             150             155             160

Met Tyr Ser Asn Gly Ser Ser Lys Asp Arg Lys Leu His Gly Thr Ala
            165             170             175

Gln Gln Leu Leu Gln Asp Ser Lys Thr Lys Ile Glu Val Ile Arg Met
        180             185             190

Gln Ile Leu Gln Ala Val Gln Thr Asn Glu Leu Ala Phe Asp Asn Ala
    195             200             205

Lys Pro Val Ile Ser Pro Leu Glu Leu Arg Met Glu Glu Leu Arg His
    210             215             220

His Phe Arg Ile Glu Phe Ala Val Ala Glu Gly Ala Lys Asn Val Met
225             230             235             240

Lys Leu Leu Gly Ser Gly Lys Val Thr Asp Arg Lys Ala Leu Ser Glu
            245             250             255

Ala Gln Ala Arg Phe Asn Glu Ser Ser Gln Lys Leu Asp Leu Leu Lys
        260             265             270

Tyr Ser Leu Glu Gln Arg Leu Asn Glu Val Pro Lys Asn His Pro Lys
    275             280             285

Ser Arg Ile Ile Ile Glu Glu Leu Ser Leu Val Ala Ala Ser Pro Thr
    290             295             300

Leu Ser Pro Arg Gln Ser Met Ile Ser Thr Gln Asn Gln Tyr Ser Thr
305             310             315             320

Leu Ser Lys Pro Ala Ala Leu Thr Gly Thr Leu Glu Val Arg Leu Met
            325             330             335

Gly Cys Gln Asp Ile Leu Glu Asn Val Pro Gly Arg Ser Lys Ala Thr
        340             345             350

Ser Val Ala Leu Pro Gly Trp Ser Pro Ser Glu Thr Arg Ser Ser Phe
        355             360             365
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Met Ser Arg Thr Ser Lys Ser Lys Ser Gly Ser Ser Arg Asn Leu Leu
    370             375             380

Lys Thr Asp Asp Leu Ser Asn Asp Val Cys Ala Val Leu Lys Leu Asp
385             390             395             400

Asn Thr Val Val Gly Gln Thr Ser Trp Lys Pro Ile Ser Asn Gln Ser
                405             410             415

Trp Asp Gln Lys Phe Thr Leu Glu Leu Asp Arg Ser Arg Glu Leu Glu
            420             425             430

Ile Ser Val Tyr Trp Arg Asp Trp Arg Ser Leu Cys Ala Val Lys Phe
            435             440             445

Leu Arg Leu Glu Asp Phe Leu Asp Asn Gln Arg His Gly Met Cys Leu
    450             455             460

Tyr Leu Glu Pro Gln Gly Thr Leu Phe Ala Glu Val Thr Phe Phe Asn
465             470             475             480

Pro Val Ile Glu Arg Arg Pro Lys Leu Gln Arg Gln Lys Lys Ile Phe
            485             490             495

Ser Lys Gln Gln Gly Lys Thr Phe Leu Arg Ala Pro Gln Met Asn Ile
            500             505             510

Asn Ile Ala Thr Trp Gly Arg Leu Val Arg Arg Ala Ile Pro Thr Val
            515             520             525

Asn His Ser Gly Thr Phe Ser Pro Gln Ala Pro Val Pro Thr Thr Val
    530             535             540

Pro Val Val Asp Val Arg Ile Pro Gln Leu Ala Pro Pro Ala Ser Asp
545             550             555             560

Ser Thr Val Thr Lys Leu Asp Phe Asp Leu Glu Pro Glu Pro Pro Pro
            565             570             575

Ala Pro Pro Arg Ala Ser Ser Leu Gly Glu Ile Asp Glu Ser Ser Glu
            580             585             590

Leu Arg Val Leu Asp Ile Pro Gly Gln Ala Ser His Phe Lys Pro Cys
            595             600             605

Ile Ile Pro Leu His
    610

<210>  167
<211>  133
<212>  PRT
<213>  Homo sapiens

<400>  167

Met Val Ser Ser Gln Lys Leu Glu Lys Pro Ile Glu Met Gly Ser Ser
1               5               10              15
```

```
Glu Pro Leu Pro Ile Ala Asp Gly Asp Arg Arg Arg Lys Lys Lys Arg
            20                  25                  30

Arg Gly Arg Ala Thr Asp Ser Leu Pro Gly Lys Phe Glu Asp Met Tyr
            35                  40                  45

Lys Leu Thr Ser Glu Leu Leu Gly Glu Gly Ala Tyr Ala Lys Val Gln
        50                  55                  60

Gly Ala Val Ser Leu Gln Asn Gly Lys Glu Tyr Ala Val Lys Ile Ile
65                  70                  75                  80

Glu Lys Gln Ala Gly His Ser Arg Ser Arg Val Phe Arg Glu Val Glu
                85                  90                  95

Thr Leu Tyr Gln Cys Gln Gly Asn Lys Asn Ile Leu Glu Leu Ile Glu
            100                 105                 110

Phe Phe Glu Asp Asp Thr Arg Phe Tyr Leu Val Phe Glu Lys Leu Gln
            115                 120                 125

Gly Gly Thr Tyr Arg
        130

<210>   168
<211>   153
<212>   PRT
<213>   Homo sapiens

<400>   168

Met Leu Gln Val Gly Val Leu Arg Asp Arg Ser Pro Ala Gly Ala Ser
1               5                   10                  15

Glu Gly Phe His Val Arg Gly Arg Trp Arg Thr Glu Asp Cys His Leu
            20                  25                  30

Arg Thr Lys Ala Ile Glu Thr Leu Arg Val Ala Gly Arg His Gln Leu
            35                  40                  45

Pro Asp Arg Ser Phe Ile Ser Phe Gly Ile Ser Ser Leu Gln Met Val
        50                  55                  60

Ser Ser Gln Lys Leu Glu Lys Pro Ile Glu Met Gly Ser Ser Glu Pro
65                  70                  75                  80

Leu Pro Ile Ala Asp Gly Asp Arg Arg Arg Lys Lys Lys Arg Arg Gly
                85                  90                  95

Arg Ala Thr Asp Ser Leu Pro Gly Lys Phe Glu Asp Met Tyr Lys Leu
            100                 105                 110

Thr Ser Glu Leu Leu Gly Glu Gly Ala Tyr Ala Lys Val Gln Gly Ala
        115                 120                 125

Val Ser Leu Gln Asn Gly Lys Glu Tyr Ala Val Lys Val Ser Val Ser
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```
Ala Glu Cys Gln Ala Leu Leu Cys Lys
145                 150
```

<210> 169
<211> 231
<212> PRT
<213> Homo sapiens

<400> 169

```
Met Gly Ser Gly Met Lys Leu Asn Asn Ser Cys Thr Pro Ile Thr Thr
1               5                   10              15

Pro Glu Leu Thr Thr Pro Cys Gly Ser Ala Glu Tyr Met Ala Pro Glu
            20              25              30

Val Val Glu Val Phe Thr Asp Gln Ala Thr Phe Tyr Asp Lys Arg Cys
        35              40              45

Asp Leu Trp Ser Leu Gly Val Val Leu Tyr Ile Met Leu Ser Gly Tyr
    50              55              60

Pro Pro Phe Val Gly His Cys Gly Ala Asp Cys Gly Trp Asp Arg Gly
65              70              75              80

Glu Val Cys Arg Val Cys Gln Asn Lys Leu Phe Glu Ser Ile Gln Glu
            85              90              95

Gly Lys Tyr Glu Phe Pro Asp Lys Asp Trp Ala His Ile Ser Ser Glu
            100             105             110

Ala Lys Asp Leu Ile Ser Lys Leu Leu Val Arg Asp Ala Lys Gln Arg
            115             120             125

Leu Ser Ala Ala Gln Val Leu Gln His Pro Trp Val Gln Gly Gln Ala
    130             135             140

Pro Glu Lys Gly Leu Pro Thr Pro Gln Val Leu Gln Arg Asn Ser Ser
145             150             155             160

Thr Met Asp Leu Thr Leu Phe Ala Ala Glu Ala Ile Ala Leu Asn Arg
            165             170             175

Gln Leu Ser Gln His Glu Glu Asn Glu Leu Ala Glu Glu Pro Glu Ala
            180             185             190

Leu Ala Asp Gly Leu Cys Ser Met Lys Leu Ser Pro Pro Cys Lys Ser
            195             200             205

Arg Leu Ala Arg Arg Arg Ala Leu Ala Gln Ala Gly Arg Gly Glu Asp
    210             215             220

Arg Ser Pro Pro Thr Ala Leu
225             230
```

<210> 170
<211> 146
<212> PRT
<213> Homo sapiens

<400> 170

Met Arg Lys Gly Val Leu Lys Asp Pro Glu Ile Ala Asp Leu Phe Tyr
1   5   10   15

Lys Asp Asp Pro Glu Glu Leu Phe Ile Gly Leu His Glu Ile Gly His
            20   25   30

Gly Ser Phe Gly Ala Val Tyr Phe Ala Thr Asn Ala His Thr Ser Glu
        35   40   45

Val Val Ala Ile Lys Lys Met Ser Tyr Ser Gly Lys Gln Thr His Glu
    50   55   60

Lys Trp Gln Asp Ile Leu Lys Glu Val Lys Phe Leu Arg Gln Leu Lys
65   70   75   80

His Pro Asn Thr Ile Glu Tyr Lys Gly Cys Tyr Leu Lys Glu His Thr
                85   90   95

Ala Trp Leu Val Met Glu Tyr Cys Leu Gly Ser Ala Ser Asp Leu Leu
            100   105   110

Glu Val His Lys Lys Pro Leu Gln Glu Val Glu Ile Ala Ala Ile Thr
        115   120   125

His Gly Ala Leu His Gly Leu Ala Tyr Leu His Ser His Ala Leu Ile
        130   135   140

His Arg
145

<210> 171
<211> 123
<212> PRT
<213> Homo sapiens

<400> 171

Met Met Glu Glu Leu His Ser Leu Asp Pro Arg Arg Gln Glu Leu Leu
1   5   10   15

Glu Ala Arg Phe Thr Gly Val Gly Val Ser Lys Gly Pro Leu Asn Ser
            20   25   30

Glu Ser Ser Asn Gln Ser Leu Cys Ser Val Gly Ser Leu Ser Asp Lys
        35   40   45

Glu Val Glu Thr Pro Glu Lys Lys Gln Asn Asp Gln Arg Asn Arg Lys
    50   55   60

Arg Lys Ala Glu Pro Tyr Glu Thr Ser Gln Gly Lys Gly Thr Pro Arg

Gly His Lys Ile Ser Asp Tyr Phe Glu Thr Ala Pro Leu Trp Phe Arg
                85   90   95

Trp Gln Cys Cys Lys Gly Gly Asn Arg Gly Ala Val Cys Ser Ala Asn
                100   105   110

Pro His Val Ser Asp Ala Ser Lys Thr Ser Ala
            115   120

<210> 172
<211> 478
<212> PRT
<213> Homo sapiens

<400> 172

Met Val Gly Ile Lys Glu Arg Pro Ser Ser Asn Leu Pro Cys Pro Pro
1   5   10   15

Leu Pro Pro Gln Thr Gln Ala Cys Pro Pro Leu Ser Trp Pro Gln Arg
                20   25   30

Leu Asp Ile Leu Leu Gly Thr Ala Arg Ala Ile Gln Phe Leu His Gln
            35   40   45

Asp Ser Pro Ser Leu Ile His Gly Asp Ile Lys Ser Ser Asn Val Leu
        50   55   60

Leu Asp Glu Arg Leu Thr Pro Lys Leu Gly Asp Phe Gly Leu Ala Arg
65   70   75   80

Phe Ser Arg Phe Ala Gly Ser Ser Pro Ser Gln Ser Ser Met Val Ala
                85   90   95

Arg Thr Gln Thr Val Arg Gly Thr Leu Ala Tyr Leu Pro Glu Glu Tyr
                100   105   110

Ile Lys Thr Gly Arg Leu Ala Val Asp Thr Asp Thr Phe Ser Phe Gly
        115   120   125

Val Val Val Leu Glu Thr Leu Ala Gly Gln Arg Ala Val Lys Thr His
        130   135   140

Gly Ala Arg Thr Lys Tyr Leu Lys Asp Leu Val Glu Glu Glu Ala Glu
145   150   155   160

Glu Ala Gly Val Ala Leu Arg Ser Thr Gln Ser Thr Leu Gln Ala Gly
                165   170   175

Leu Ala Ala Asp Ala Trp Ala Ala Pro Ile Ala Met Gln Ile Tyr Lys
                180   185   190

Lys His Leu Asp Pro Arg Pro Gly Pro Cys His Leu Ser Trp Ala Trp
            195   200   205

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Ala Trp Ala Ser Trp Pro Ala Ala Ala Cys Thr Ala Gly Pro Lys Gly
    210             215             220
Arg Pro Pro Met Thr Gln Val Tyr Glu Arg Leu Glu Lys Leu Gln Ala
225             230             235             240
Val Val Ala Gly Val Pro Gly His Leu Glu Ala Ala Ser Cys Ile Pro
            245             250             255
Phe Pro Gln Glu Asn Ser Tyr Val Ser Ser Thr Gly Arg Ala His Ser
            260             265             270
Gly Ala Ala Pro Trp Gln Pro Leu Ala Ala Pro Ser Gly Ala Ser Ala
        275             280             285
Gln Ala Ala Glu Gln Leu Gln Arg Gly Pro Asn Gln Pro Val Glu Ser
    290             295             300
Asp Glu Ser Leu Gly Gly Leu Ser Ala Ala Leu Arg Ser Trp His Leu
305             310             315             320
Thr Pro Ser Cys Pro Leu Asp Pro Ala Pro Leu Arg Glu Ala Gly Cys
            325             330             335
Pro Gln Gly Asp Thr Ala Gly Glu Ser Ser Trp Gly Ser Gly Pro Gly
            340             345             350
Ser Arg Pro Thr Ala Val Glu Gly Leu Ala Leu Gly Ser Ser Ala Ser
        355             360             365
Ser Ser Ser Glu Pro Pro Gln Ile Ile Ile Asn Pro Ala Arg Gln Lys
    370             375             380
Met Val Gln Lys Leu Ala Leu Tyr Glu Asp Gly Ala Leu Asp Ser Leu
385             390             395             400
Gln Leu Leu Ser Ser Ser Ser Leu Pro Gly Leu Gly Leu Glu Gln Asp
            405             410             415
Arg Gln Gly Pro Lys Lys Val Met Asn Phe Arg Ala Asp Val Phe Thr
            420             425             430
Trp Ala Asp Pro Pro Asn Pro Glu Val Lys Val Leu Met Val Arg Ser
            435             440             445
Ser His Gly Ala Arg Val Leu Ser Thr Leu Pro Ala Val Gly Val Gly
    450             455             460
Ala His Ala Arg Trp Gly Glu Lys Glu Val Ala Leu Leu Phe
465             470             475
```

<210> 173
<211> 344
<212> PRT
<213> Homo sapiens

<400> 173

Met Ala Gly Gly Pro Gly Pro Gly Glu Pro Ala Ala Pro Gly Ala Gln
1   5   10   15

His Phe Leu Tyr Glu Val Pro Pro Trp Val Met Cys Arg Phe Tyr Lys
            20   25   30

Val Met Asp Ala Leu Glu Pro Ala Asp Trp Cys Gln Phe Ala Ala Leu
        35   40   45

Ile Val Arg Asp Gln Thr Glu Leu Arg Leu Cys Glu Arg Ser Gly Gln
    50   55   60

Arg Thr Ala Ser Val Leu Trp Pro Trp Ile Asn Arg Asn Ala Arg Val
65   70   75   80

Ala Asp Leu Val His Ile Leu Thr His Leu Gln Leu Leu Arg Ala Arg
            85   90   95

Asp Ile Ile Thr Ala Trp His Pro Pro Ala Pro Leu Pro Ser Pro Gly
            100   105   110

Thr Thr Ala Pro Arg Pro Ser Ser Ile Pro Ala Pro Ala Glu Ala Glu
        115   120   125

Ala Trp Ser Pro Arg Lys Leu Pro Ser Ser Ala Ser Thr Phe Leu Ser
        130   135   140

Pro Ala Phe Pro Gly Ser Gln Thr His Ser Gly Pro Glu Leu Gly Leu
145   150   155   160

Val Pro Ser Pro Ala Ser Leu Trp Pro Pro Pro Ser Pro Ala Pro
            165   170   175

Ser Ser Thr Lys Pro Gly Pro Glu Ser Ser Val Ser Leu Leu Gln Gly
            180   185   190

Ala Arg Pro Ser Pro Phe Cys Trp Pro Leu Cys Glu Ile Ser Arg Gly
        195   200   205

Thr His Asn Phe Ser Glu Glu Leu Lys Ile Gly Glu Gly Gly Phe Gly
    210   215   220

Cys Val Tyr Arg Ala Val Met Arg Asn Thr Val Tyr Ala Val Lys Arg
225   230   235   240

Leu Lys Glu Asn Ala Asp Leu Glu Trp Thr Ala Val Lys Gln Ser Phe
            245   250   255

Leu Thr Glu Val Glu Gln Leu Ser Arg Phe Arg His Pro Asn Ile Val
            260   265   270

Asp Phe Ala Gly Tyr Cys Ala Gln Asn Gly Phe Tyr Cys Leu Val Tyr
        275   280   285

Gly Phe Leu Pro Asn Gly Ser Leu Glu Asp Arg Leu His Cys Gln Thr
    290   295   300

Gln Ala Cys Pro Pro Leu Ser Trp Pro Gln Arg Leu Asp Ile Leu Leu
305   310   315   320

Gly Thr Ala Arg Ala Ser Gln Val Ser Cys Asn Arg Val Ser Ser Cys
            325   330   335

Val Ser Lys Ser Ser Pro Gly Leu
            340

<210> 174
<211> 336
<212> PRT
<213> Homo sapiens

<400> 174

Met Phe Thr Glu Glu Asp Val Lys Phe Tyr Leu Ala Glu Leu Ala Leu
1   5   10   15

Ala Leu Asp His Leu His Ser Leu Gly Ile Ile Tyr Arg Asp Leu Lys
            20   25   30

Pro Glu Asn Ile Leu Leu Asp Glu Glu Gly His Ile Lys Leu Thr Asp
            35   40   45

Phe Gly Leu Ser Lys Glu Ser Ile Asp His Glu Lys Lys Ala Tyr Ser
        50   55   60

Phe Cys Gly Thr Val Glu Tyr Met Ala Pro Glu Val Val Asn Arg Arg
65   70   75   80

Gly His Thr Gln Ser Ala Asp Trp Trp Ser Phe Gly Val Leu Met Phe
            85   90   95

Glu Met Leu Thr Gly Thr Leu Pro Phe Gln Gly Lys Asp Arg Lys Glu
            100   105   110

Thr Met Thr Met Ile Leu Lys Ala Lys Leu Gly Met Pro Gln Phe Leu
        115   120   125

Ser Pro Glu Ala Gln Ser Leu Leu Arg Met Leu Phe Lys Arg Asn Pro
    130   135   140

Ala Asn Arg Leu Gly Ala Gly Pro Asp Gly Val Glu Glu Ile Lys Arg
145   150   155   160

His Ser Phe Phe Ser Thr Ile Asp Trp Asn Lys Leu Tyr Arg Arg Glu
            165   170   175

Ile His Pro Pro Phe Lys Pro Ala Thr Gly Arg Pro Glu Asp Thr Phe
        180   185   190

Tyr Phe Asp Pro Glu Phe Thr Ala Lys Thr Pro Lys Asp Ser Pro Gly
        195   200   205

Ile Pro Pro Ser Ala Asn Ala His Gln Leu Phe Arg Gly Phe Ser Phe

Val Ala Ile Thr Ser Asp Asp Glu Ser Gln Ala Met Gln Thr Val Gly
225   230   235   240

Val His Ser Ile Val Gln Gln Leu His Arg Asn Ser Ile Gln Phe Thr
    245   250   255

Asp Gly Tyr Glu Val Lys Glu Asp Ile Gly Val Gly Ser Tyr Ser Val
    260   265   270

Cys Lys Arg Cys Ile His Lys Ala Thr Asn Met Glu Phe Ala Val Lys
    275   280   285

Val Asn Phe Phe Tyr Leu Lys Cys Asn Ser Tyr Ser Ser Cys Ser Cys
    290   295   300

Met Ser Val Pro Val Lys Asn Tyr Thr Pro Leu Val Val Lys Ser Ala
305   310   315   320

Phe Cys Tyr Lys Lys Val Lys Tyr Leu Ala Ser Asp Leu Gln Arg Ser
    325   330   335

<210> 175
<211> 198
<212> PRT
<213> Homo sapiens

<400> 175

Met Pro Leu Ala Gln Leu Ala Asp Pro Trp Gln Lys Met Ala Val Glu
1   5   10   15

Ser Pro Ser Asp Ser Ala Glu Asn Gly Gln Gln Ile Met Asp Glu Pro
    20   25   30

Met Gly Glu Glu Glu Ile Asn Pro Gln Thr Glu Glu Val Ser Ile Lys
    35   40   45

Glu Ile Ala Ile Thr His His Val Lys Glu Gly His Glu Lys Ala Asp
    50   55   60

Pro Ser Gln Phe Glu Leu Leu Lys Val Leu Gly Gln Gly Ser Phe Gly
65   70   75   80

Lys Val Phe Leu Val Lys Lys Ile Ser Gly Ser Asp Ala Arg Gln Leu
    85   90   95

Tyr Ala Met Lys Val Leu Lys Lys Ala Thr Leu Lys Val Arg Asp Arg
    100   105   110

Val Arg Thr Lys Met Glu Arg Asp Ile Leu Val Glu Val Asn His Pro
    115   120   125

Phe Ile Val Lys Leu His Tyr Ala Phe Gln Thr Glu Gly Lys Leu Tyr
    130   135   140

Leu Ile Leu Asp Phe Leu Arg Gly Gly Asp Leu Phe Thr Arg Leu Ser
145   150   155   160

Lys Glu Val Met Phe Thr Glu Glu Asp Val Lys Phe Tyr Leu Ala Glu
                    165   170   175

Leu Ala Leu Ala Leu Asp His Leu His Ser Leu Gly Ile Ile Tyr Arg
                180   185   190

Asp Leu Lys Pro Glu Lys
            195

<210> 176
<211> 489
<212> PRT
<213> Homo sapiens

<400> 176

Met Ser Thr Glu Ala Asp Glu Gly Ile Thr Phe Ser Val Pro Pro Phe
1   5   10   15

Ala Pro Ser Gly Phe Cys Thr Ile Pro Glu Gly Gly Ile Cys Arg Arg
                20   25   30

Gly Gly Ala Ala Ala Val Gly Glu Gly Glu Glu His Gln Leu Pro Pro
            35   40   45

Pro Pro Pro Gly Ser Phe Trp Asn Val Glu Ser Ala Ala Ala Pro Gly
        50   55   60

Ile Gly Cys Pro Ala Ala Thr Ser Ser Ser Ser Ala Thr Arg Gly Arg
65   70   75   80

Gly Ser Ser Val Gly Gly Gly Ser Arg Arg Thr Thr Val Ala Tyr Val
                85   90   95

Ile Asn Glu Ala Ser Gln Gly Gln Leu Val Val Ala Glu Ser Glu Ala
                100   105   110

Leu Gln Ser Leu Arg Glu Ala Cys Glu Thr Val Gly Ala Thr Leu Glu
            115   120   125

Thr Leu His Phe Gly Lys Leu Asp Phe Gly Glu Thr Thr Val Leu Asp
    130   135   140

Arg Phe Tyr Asn Ala Asp Ile Ala Val Val Glu Met Ser Asp Ala Phe
145   150   155   160

Arg Gln Pro Ser Leu Phe Tyr His Leu Gly Val Arg Glu Ser Phe Ser
                165   170   175

Met Ala Asn Asn Ile Ile Leu Tyr Cys Asp Thr Asn Ser Asp Ser Leu
                180   185   190

Gln Ser Leu Lys Glu Ile Ile Cys Gln Lys Asn Thr Met Cys Thr Gly
            195   200   205

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Asn Tyr Thr Phe Val Pro Tyr Met Ile Thr Pro His Asn Lys Val Tyr
    210             215             220
Cys Cys Asp Ser Ser Phe Met Lys Gly Leu Thr Glu Leu Met Gln Pro
225             230             235             240
Asn Phe Glu Leu Leu Leu Gly Pro Ile Cys Leu Pro Leu Val Asp Arg
            245             250             255
Phe Ile Gln Leu Leu Lys Val Ala Gln Ala Ser Ser Ser Gln Tyr Phe
            260             265             270
Arg Glu Ser Ile Leu Asn Asp Ile Arg Lys Ala Arg Asn Leu Tyr Thr
        275             280             285
Gly Lys Glu Leu Ala Ala Glu Leu Ala Arg Ile Arg Gln Arg Val Asp
    290             295             300
Asn Ile Glu Val Leu Thr Ala Asp Ile Val Ile Asn Leu Leu Leu Ser
305             310             315             320
Tyr Arg Asp Ile Gln Asp Tyr Asp Ser Ile Val Lys Leu Val Glu Thr
            325             330             335
Leu Glu Lys Leu Pro Thr Phe Asp Leu Ala Ser His His His Val Lys
            340             345             350
Phe His Tyr Ala Phe Ala Leu Asn Arg Arg Asn Leu Pro Gly Asp Arg
        355             360             365
Ala Lys Ala Leu Asp Ile Met Ile Pro Met Val Gln Ser Glu Gly Gln
    370             375             380
Val Ala Ser Asp Met Tyr Cys Leu Val Gly Arg Ile Tyr Lys Asp Met
385             390             395             400
Phe Leu Asp Ser Asn Phe Thr Asp Thr Glu Ser Arg Asp His Gly Ala
            405             410             415
Ser Trp Phe Lys Lys Ala Phe Glu Ser Glu Pro Thr Leu Gln Ser Gly
            420             425             430
Ile Asn Tyr Ala Val Leu Leu Leu Ala Ala Gly His Gln Phe Glu Ser
        435             440             445
Ser Phe Glu Leu Arg Lys Val Gly Asn Tyr Asn Leu Asn Phe Tyr Met
    450             455             460
Glu Ile Lys Lys Leu Gly Pro Asn Leu Val Gln Arg Arg Ile Ser Ala
465             470             475             480
Asp Ser Asp Gly Ser Pro Gly Phe Val
                485

<210>   177
<211>   105
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<212> PRT
<213> Homo sapiens

<400> 177

Met Arg Glu Phe Glu Val Leu Lys Lys Leu Asn His Lys Asn Ile Val
1   5   10   15

Lys Leu Phe Ala Ile Glu Glu Glu Thr Thr Thr Arg His Lys Val Leu
            20   25   30

Ile Met Glu Phe Cys Pro Cys Gly Ser Leu Tyr Thr Val Leu Glu Glu
        35   40   45

Pro Ser Asn Ala Tyr Gly Leu Pro Glu Ser Glu Phe Leu Ile Val Leu
        50   55   60

Arg Asp Val Val Gly Gly Met Asn His Leu Arg Glu Asn Gly Ile Val
65   70   75   80

His Arg Asp Ile Lys Pro Gly Asn Ile Met Arg Ala Leu Tyr His Ser
                85   90   95

Leu Val Asp Asp Ser Phe His Pro Pro
                100   105

<210> 178
<211> 413
<212> PRT
<213> Homo sapiens

<220>
<221> -
<222> (1)..(413)
<223> "XAA" can be any amino acid

<400> 178

Met Tyr Cys Phe Gly Arg Lys Xaa Tyr Ile Ser Thr Arg Pro Cys Phe
1   5   10   15

Pro Asn Lys Thr Cys Gln Lys Met Leu Ile Ile Leu Thr Ser Ala Leu
            20   25   30

Gln Ile Ala His Arg Cys Ile Cys Arg Ile Leu Leu Gly Ser Arg Val
        35   40   45

Leu Ala Ala Lys Ala Ser Gly Asn Cys Thr Leu Asn Ser Glu Asp Phe
        50   55   60

Ile Phe Asn Ile Gly Ser Ala Ala Tyr Asp Ala Val Leu Asp Arg Asn
65   70   75   80

Val Ala Ile Lys Lys Leu Ser Arg Pro Phe Gln Asn Gln Thr His Ala
                85   90   95

```
Lys Arg Ala Tyr Arg Glu Leu Val Leu Met Lys Cys Val Asn His Lys
        100              105              110

Asn Ile Ile Ser Leu Leu Asn Val Phe Thr Pro Gln Lys Thr Leu Glu
        115              120              125

Glu Phe Gln Asp Val Tyr Leu Val Met Glu Leu Met Asp Ala Asn Leu
        130              135              140

Cys Gln Val Ile Gln Met Glu Leu Asp His Glu Arg Met Ser Tyr Leu
145              150              155              160

Leu Tyr Gln Met Leu Cys Gly Ile Lys His Leu His Ser Ala Gly Ile
             165              170              175

Ile His Arg Asp Leu Lys Pro Ser Asn Ile Val Val Lys Ser Asp Cys
             180              185              190

Thr Leu Lys Ile Leu Asp Phe Gly Leu Ala Arg Thr Ala Gly Thr Ser
             195              200              205

Phe Met Met Thr Pro Tyr Val Val Thr Arg Tyr Tyr Arg Ala Pro Glu
        210              215              220

Val Ile Leu Gly Met Gly Tyr Lys Glu Asn Val Asp Ile Trp Ser Val
225              230              235              240

Gly Cys Ile Met Gly Glu Met Val Arg His Lys Ile Leu Phe Pro Gly
             245              250              255

Arg Asp Tyr Ile Asp Gln Trp Asn Lys Val Ile Glu Gln Leu Gly Thr
             260              265              270

Pro Cys Pro Glu Phe Met Lys Lys Leu Gln Pro Thr Val Arg Asn Tyr
             275              280              285

Val Glu Asn Arg Pro Lys Tyr Ala Gly Leu Thr Phe Pro Lys Leu Phe
        290              295              300

Pro Asp Ser Leu Phe Pro Ala Asp Ser Glu His Asn Lys Leu Lys Ala
305              310              315              320

Ser Gln Ala Arg Asp Leu Leu Ser Lys Met Leu Val Ile Asp Pro Ala
             325              330              335

Lys Arg Ile Ser Val Asp Asp Ala Leu Gln His Pro Tyr Ile Asn Val
             340              345              350

Trp Tyr Asp Pro Ala Glu Val Glu Ala Pro Pro Pro Gln Ile Tyr Asp
             355              360              365

Lys Gln Leu Asp Glu Arg Glu His Thr Ile Glu Glu Trp Lys Glu Leu
        370              375              380

Ile Tyr Lys Glu Val Met Asn Ser Glu Glu Lys Thr Lys Asn Gly Val
385              390              395              400
```

Val Lys Gly Gln Pro Ser Pro Ser Ala Gln Val Gln Gln
                405   410

<210>   179
<211>   108
<212>   PRT
<213>   Homo sapiens

<400>   179

Met Ser Lys Ser Lys Val Asp Asn Gln Phe Tyr Ser Val Glu Val Gly
1   5   10   15

Asp Ser Thr Phe Thr Val Leu Lys Arg Tyr Gln Asn Leu Lys Pro Ile
            20   25   30

Gly Ser Gly Ala Gln Gly Ile Val Cys Ala Ala Tyr Asp Ala Val Leu
            35   40   45

Asp Arg Asn Val Ala Ile Lys Lys Leu Ser Arg Pro Phe Gln Asn Gln
        50   55   60

Thr His Ala Lys Arg Ala Tyr Arg Glu Leu Val Leu Met Lys Cys Val
65   70   75   80

Asn His Lys Asn Val Ser Phe Val Ile Phe Lys Leu Leu Ala Val Gly
                85   90   95

Val Cys Lys Ile Gly Lys Arg Lys Cys Val Cys Thr
            100   105

<210>   180
<211>   336
<212>   PRT
<213>   Homo sapiens

<400>   180

Met Ala Met Thr Gly Ser Thr Pro Cys Ser Ser Met Ser Asn His Thr
1   5   10   15

Lys Glu Arg Val Thr Met Thr Lys Val Thr Leu Glu Asn Phe Tyr Ser
            20   25   30

Asn Leu Ile Ala Gln His Glu Glu Arg Glu Met Arg Gln Lys Lys Leu
            35   40   45

Glu Lys Val Met Glu Glu Glu Gly Leu Lys Asp Glu Glu Lys Arg Leu
        50   55   60

Arg Arg Ser Ala His Ala Arg Lys Glu Thr Glu Phe Leu Arg Leu Lys
65   70   75   80

Arg Thr Arg Leu Gly Leu Glu Asp Phe Glu Ser Leu Lys Val Ile Gly
                85   90   95

Arg Gly Ala Phe Gly Glu Val Arg Leu Val Gln Lys Lys Asp Thr Gly

His Val Tyr Ala Met Lys Ile Leu Arg Lys Ala Asp Met Leu Glu Lys
        115   120   125

Glu Gln Val Gly His Ile Arg Ala Glu Arg Asp Ile Leu Val Glu Ala
        130   135   140

Asp Ser Leu Trp Val Val Lys Met Phe Tyr Ser Phe Gln Asp Lys Leu
145   150   155   160

Asn Leu Tyr Leu Ile Met Glu Phe Leu Pro Gly Gly Asp Met Met Thr
                165   170   175

Leu Leu Met Lys Lys Asp Thr Leu Thr Glu Glu Glu Thr Gln Phe Tyr
            180   185   190

Ile Ala Glu Thr Val Leu Ala Ile Asp Ser Ile His Gln Leu Gly Phe
        195   200   205

Ile His Arg Asp Ile Lys Pro Asp Asn Leu Leu Leu Asp Ser Lys Gly
        210   215   220

His Val Lys Leu Ser Asp Phe Gly Leu Cys Thr Gly Leu Lys Lys Ala
225   230   235   240

His Arg Thr Glu Phe Tyr Arg Asn Leu Asn His Ser Leu Pro Ser Asp
                245   250   255

Phe Thr Phe Gln Asn Met Asn Ser Lys Arg Lys Ala Glu Thr Trp Lys
                260   265   270

Arg Asn Arg Arg Gln Leu Ala Phe Ser Thr Val Gly Thr Pro Asp Tyr
            275   280   285

Ile Ala Pro Glu Val Phe Met Gln Thr Gly Tyr Asn Lys Leu Cys Asp
        290   295   300

Trp Trp Ser Leu Gly Val Ile Met Tyr Glu Met Leu Ile Gly Lys Leu
305   310   315   320

His Gly Phe Arg Gly Leu Phe Leu Cys Ile His Asp Arg Leu Leu His
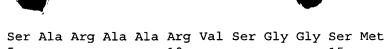   325   330   335

<210>   181
<211>   415
<212>   PRT
<213>   Homo sapiens

<220>
<221>   -
<222>   (1)..(415)
<223>   "XAA " can be any amino acid

<400>   181

```
Xaa Arg His Glu Ser Ala Arg Ala Ala Arg Val Ser Gly Gly Ser Met
1               5                   10              15

Leu Asp Ile Ile Lys Tyr Ile Val Asn Arg Gly Glu His Lys Asn Gly
            20              25              30

Val Leu Glu Glu Ala Ile Ile Ala Thr Ile Leu Lys Glu Val Leu Glu
        35              40              45

Gly Leu Asp Tyr Leu His Arg Asn Gly Gln Ile His Arg Asp Leu Lys
    50              55              60

Ala Gly Asn Ile Leu Leu Gly Glu Asp Gly Ser Val Gln Ile Ala Asp
65              70              75              80

Phe Gly Val Ser Ala Phe Leu Ala Thr Gly Gly Asp Val Thr Arg Asn
            85              90              95

Lys Val Arg Lys Thr Phe Val Gly Thr Pro Cys Trp Met Ala Pro Glu
            100             105             110

Val Met Glu Gln Val Arg Gly Tyr Asp Phe Lys Ala Asp Met Trp Ser
        115             120             125

Phe Gly Ile Thr Ala Ile Glu Leu Ala Thr Gly Ala Ala Pro Tyr His
    130             135             140

Lys Tyr Pro Pro Met Lys Val Leu Met Leu Thr Leu Gln Asn Asp Pro
145             150             155             160

Pro Thr Leu Glu Thr Gly Val Glu Asp Lys Glu Met Met Lys Lys Tyr
            165             170             175

Gly Lys Ser Phe Arg Lys Leu Leu Ser Leu Cys Leu Gln Lys Asp Pro
            180             185             190

Ser Lys Arg Pro Thr Ala Ala Glu Leu Leu Lys Cys Lys Phe Phe Gln
            195             200             205

Lys Ala Lys Asn Arg Glu Tyr Leu Ile Glu Lys Leu Leu Thr Arg Thr
    210             215             220

Pro Asp Ile Ala Gln Arg Ala Lys Lys Val Arg Arg Val Pro Gly Ser
225             230             235             240

Ser Gly His Leu His Lys Thr Glu Asp Gly Asp Trp Glu Trp Ser Asp
            245             250             255

Asp Glu Met Asp Glu Lys Ser Glu Glu Gly Lys Ala Ala Phe Ser Gln
            260             265             270

Glu Lys Ser Arg Arg Val Lys Glu Glu Asn Pro Glu Ile Ala Val Ser
            275             280             285

Ala Ser Thr Ile Pro Glu Gln Ile Gln Ser Leu Ser Val His Asp Ser
    290             295             300
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```
Gln Gly Pro Pro Asn Ala Asn Glu Asp Tyr Arg Glu Ala Ser Ser Cys
305                 310                 315                 320

Ala Val Asn Leu Val Leu Arg Leu Arg Asn Ser Arg Lys Glu Leu Asn
                325                 330                 335

Asp Ile Arg Phe Glu Phe Thr Pro Gly Arg Asp Thr Ala Asp Gly Val
                340                 345                 350

Ser Gln Glu Leu Phe Ser Ala Gly Leu Val Asp Gly His Asp Val Val
                355                 360                 365

Ile Val Ala Ala Asn Leu Gln Lys Ile Val Asp Asp Pro Lys Ala Leu
        370                 375                 380

Lys Thr Leu Thr Phe Lys Leu Ala Ser Gly Cys Asp Gly Ser Glu Ile
385                 390                 395                 400

Pro Asp Glu Val Lys Leu Ile Gly Phe Ala Gln Leu Ser Val Ser
                405                 410                 415


<210>   182
<211>   409
<212>   PRT
<213>   Homo sapiens

<220>
<221>   -
<222>   (1)..(409)
<223>   "Xaa" can be any amino acid


<400>   182

Xaa Arg His Glu Ser Ala Arg Ala Ala Arg Val Ser Gly Gly Ser Met
1                   5                   10                  15

Leu Asp Ile Ile Lys Tyr Ile Val Asn Arg Gly Glu His Lys Asn Gly
                20                  25                  30

Val Leu Glu Glu Ala Ile Ile Ala Thr Ile Leu Lys Glu Val Leu Glu
            35                  40                  45

Gly Leu Asp Tyr Leu His Arg Asn Gly Gln Ile His Arg Asp Leu Lys
        50                  55                  60

Ala Gly Asn Ile Leu Leu Gly Glu Asp Gly Ser Val Gln Ile Ala Asp
65                  70                  75                  80

Phe Gly Val Ser Ala Phe Leu Ala Thr Gly Gly Asp Val Thr Arg Asn
                85                  90                  95

Lys Val Arg Lys Thr Phe Val Gly Thr Pro Cys Trp Met Ala Pro Glu
                100                 105                 110

Val Met Glu Gln Val Arg Gly Tyr Asp Phe Lys Ala Asp Met Trp Ser
            115                 120                 125
```

Phe Gly Ile Thr Ala Ile Glu Leu Ala Thr Gly Ala Ala Pro Tyr His
    130   135   140

Lys Tyr Pro Pro Met Lys Val Leu Met Leu Thr Leu Gln Asn Asp Pro
145   150   155   160

Pro Thr Leu Glu Thr Gly Val Glu Asp Lys Glu Met Met Lys Lys Tyr
            165   170   175

Gly Lys Ser Phe Arg Lys Leu Leu Ser Leu Cys Leu Gln Lys Asp Pro
            180   185   190

Ser Lys Arg Pro Thr Ala Ala Glu Leu Leu Lys Cys Lys Phe Phe Gln
    195   200   205

Lys Ala Lys Asn Arg Glu Tyr Leu Ile Glu Lys Leu Leu Thr Arg Thr
    210   215   220

Pro Asp Ile Ala Gln Arg Ala Lys Lys Val Arg Arg Val Pro Gly Ser
225   230   235   240

Ser Gly His Leu His Lys Thr Glu Asp Gly Asp Trp Glu Trp Ser Asp
            245   250   255

Asp Glu Met Asp Glu Lys Ser Glu Glu Gly Lys Ala Ala Phe Ser Gln
            260   265   270

Glu Lys Ser Arg Arg Val Lys Glu Glu Asn Pro Glu Ile Ala Val Ser
    275   280   285

Ala Ser Thr Ile Pro Glu Gln Ile Gln Ser Leu Ser Val His Asp Ser
    290   295   300

Gln Gly Pro Pro Asn Ala Asn Glu Asp Tyr Arg Glu Ala Ser Ser Cys
305   310   315   320

Ala Val Asn Leu Val Leu Arg Leu Arg Asn Ser Arg Lys Glu Leu Asn
            325   330   335

Asp Ile Arg Phe Glu Phe Thr Pro Gly Arg Asp Thr Ala Asp Gly Val
            340   345   350

Ser Gln Glu Leu Phe Ser Ala Gly Leu Val Asp Gly His Asp Val Val
            355   360   365

Ile Val Ala Ala Asn Leu Gln Lys Ile Val Asp Asp Pro Lys Ala Leu
    370   375   380

Lys Thr Leu Thr Phe Lys Leu Asn Gln Phe Leu His Leu Glu Ala Phe
385   390   395   400

Asp Ser Ala Ala Leu Gly Asn Val Phe
            405